

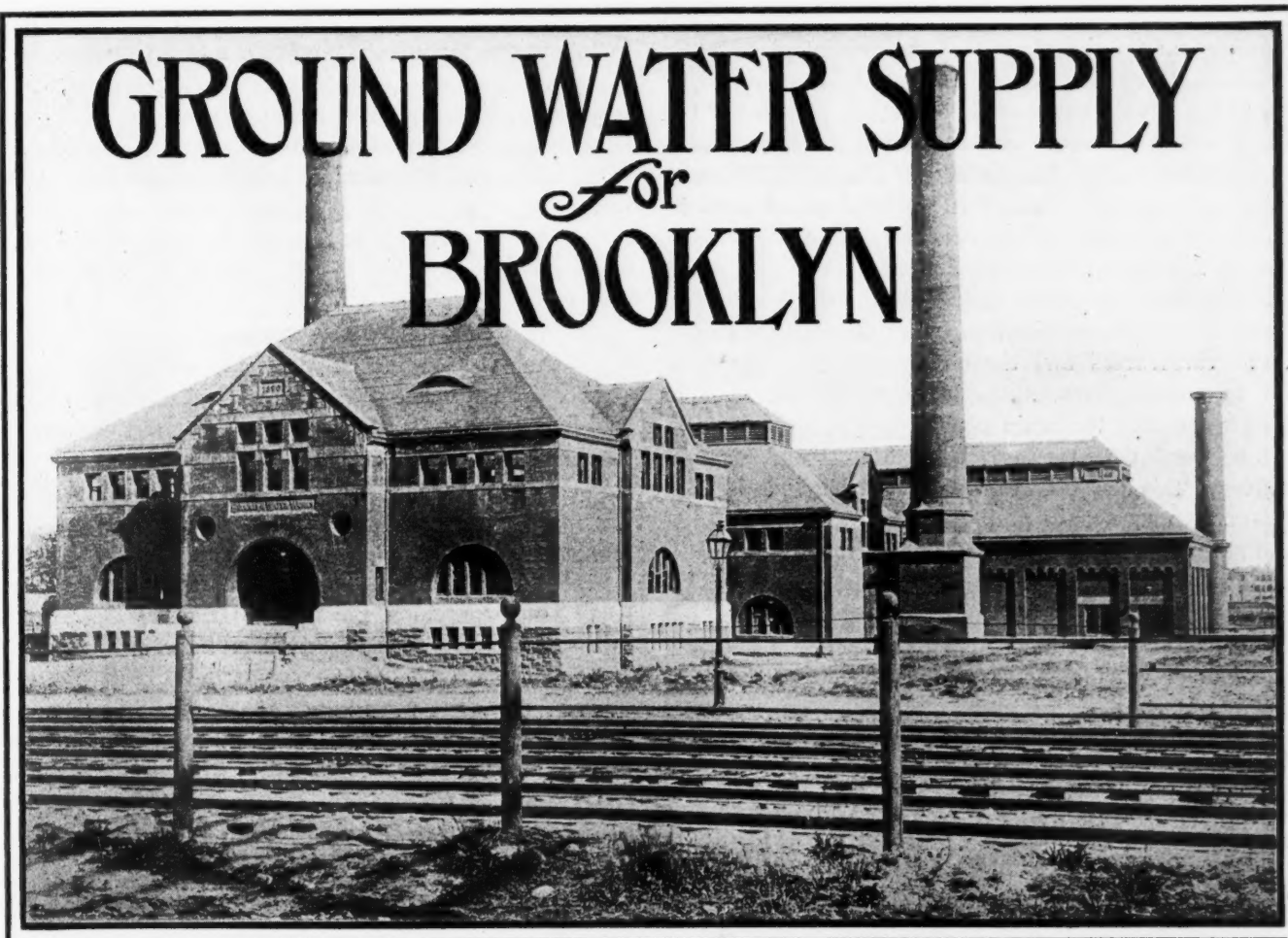
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And Engineer

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No. 13.



PRESENT CENTRAL PUMPING STATION AT RIDGEWOOD

By WILLIAM FYFE TURNBULL

THE Board of Estimate and Apportionment of New York City, at a recent meeting, approved a plan for obtaining additional water supply from the underground waters of Suffolk County, Long Island. This scheme is supplemental to the Catskill development now under way and may serve to postpone the full extension of the latter works, since the engineers of the Board of Water Supply believe it better to depend on two sources of supply from different directions than on one entirely from the North.

No sooner had the surveys for the Catskill plan been completed and their results laid before the city authorities than the Board of Water Supply began an extensive series of investigations on Long Island. These have been in continued progress since the summer of 1905 and have resulted in a thorough survey of the southern half of the island within the territory south of the central dotted line on the accompanying map.

The northern boundary of this area is the watershed between streams flowing south into the Atlantic Ocean and those flowing north into Long Island Sound. The city is restrained from making use of any of these surface waters and upon this point was based whatever opposition there was at first to the scheme. The inhabitants of these districts feared that their own water supplies would be endangered. Hence the Board of Water Supply in its report to the city took great care to make it clear that the present plan would make use of underground sources only. When this was clearly understood, opposition to the plan ceased and no legal obstacles are expected to be encountered in carrying out the project as now outlined.

The plan presented shows a main gravity conduit constructed of reinforced concrete, extending east from the present central pumping station at Ridgewood to a point near East Quogue, a distance of 73 miles, and a chain of driven wells 500 to 1,000 feet apart and

100 to 200 feet deep. The conduit follows the alignment of the one now in use from Ridgewood to Rosedale, a distance of about eight miles. From Rosedale to a point near Millburn Reservoir, distant about six miles, the line crosses to the north side of the Long Island Railroad and departs from the line of the present works. For this distance an alternative line is given, running south of the railroad, and it is now probable that it will be the line used, since the city has already acquired title to a strip of land there for the purpose of laying other pipes. The same strip affords ample room for the conduit of the present plan.

From Millburn Reservoir eastwardly the land to be taken lies wholly north of the Montauk division of the Long Island Railroad, and a location is selected such as to secure sufficient material for fill and at the same time to keep as far above the ground-water level as possible. At a point about two miles from the easterly end of this main conduit the supply is to be reinforced by a similar underground development from the Peconic Valley. A collecting conduit about four miles long is to be constructed and the supply will be pumped to the top of an intervening ridge and allowed to flow by gravity into the main conduit.

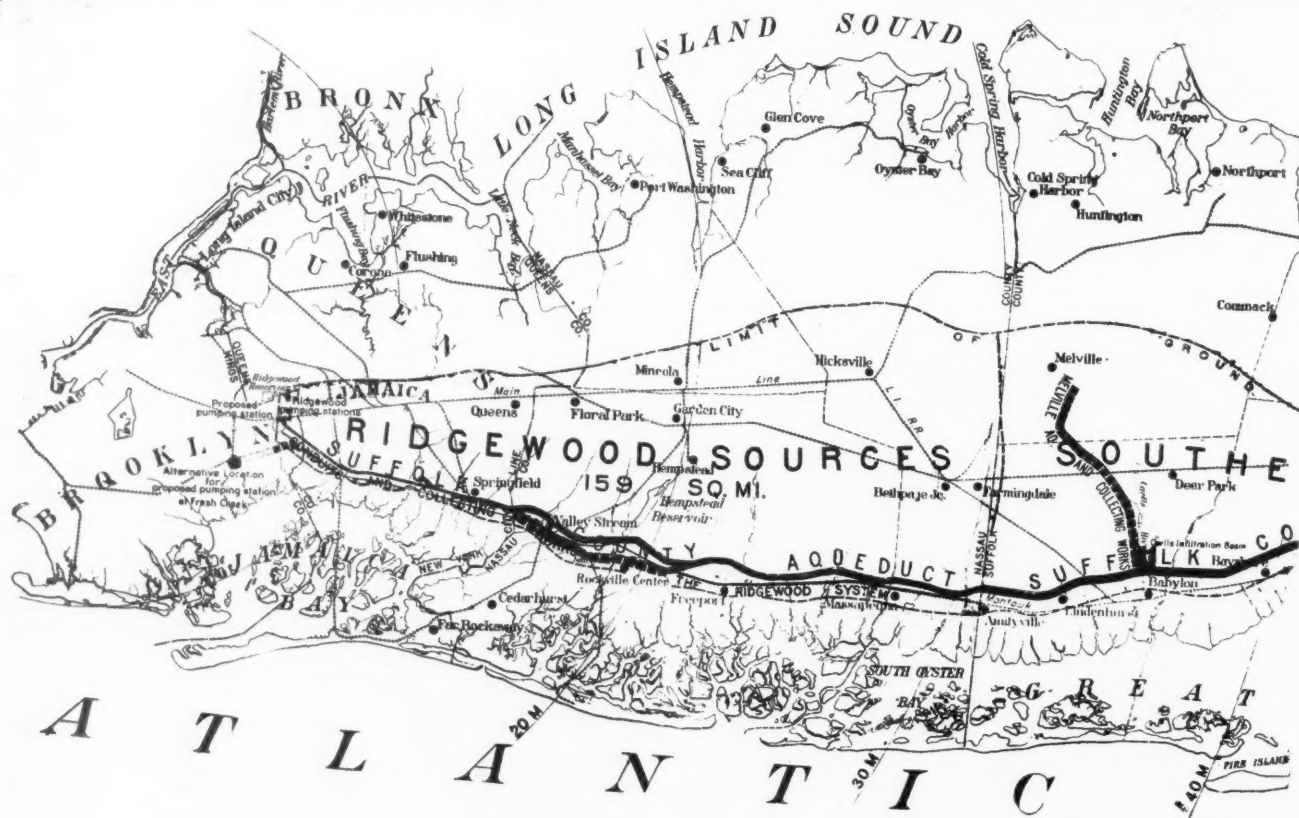
The total drainage area contributing underground water for this development is about 322 square miles. Of this, 294 square miles pertain to the main or southern conduit, while 38 square miles supply the Peconic Valley adjunct. The land to be taken is sparsely settled and covered with low growths of scrub oak and pine, and will consist of a right-of-way from 600 to 1,000 feet in width along which will be driven the necessary wells. These wells will be operated from one or more central power stations and will deliver their water into the

aqueduct which will conduct the supply to the Brooklyn pumping station. There will be from five to ten wells to the mile along the line of the conduit. The surveys of the Board of Water Supply indicate that the yellow sands forming the upper stratum of the older geological structure of the island afford the most advantageous sources of good water and it is assumed that wells driven to depths of 100 to 200 feet will reach this stratum.

Use is also to be made of four filtration basins and if necessary of branch collecting conduits projected to follow the Melville, Connetquot and Carman's river valleys. These are intended for the development of underground storage which might have to be drawn upon to meet the requirements of a dry season. It is further intended to construct twelve reservoirs on salt water estuaries for the purpose of artificially raising the ground-water level, thus lessening the danger from the infiltration of salt water into the underground sources.

An alternative location is proposed for the Ridgewood pumping station at the head of Fresh Creek Basin. The possible saving in the cost of delivering coal by boat at this point as compared with delivering by rail at the present site may lead to the removal of the central station. In that event the entire water supply from the development under discussion will be pumped into the Ridgewood Reservoir in Brooklyn instead of part being sent over to Manhattan, as was suggested in order to help out the latter borough until the completion of the Catskill plan.

For the complete development of the Suffolk County underground sources, yielding about 250,000,000 gallons per day, the cost is estimated at \$47,173,000. The cost



MAP OF LONG ISLAND, SHOWING EXISTING AND PROPOSED AQUEDUCT

of completion of various stages of the work is estimated as follows:

Time of delivery of first water to conduits of Ridgewood (present) system on Suffolk County line..	2 years
Cost of said two years' work.....	\$7,200,000
Time of delivery of first water to Brooklyn without use of conduits of Ridgewood system.....	4 years
Cost of said four years' work.....	\$16,700,000
Time of delivery of first installment of 70,000,000 gals. daily	5 years
Cost of said five years' work, including full size concrete cut-and-cover aqueduct to Brooklyn and pumping station in Brooklyn.....	\$21,700,000

The soil and its topography are exceptionally favorable for the cheap construction of the cut-and-fill type of aqueduct, and the best economy dictates that the aqueduct shall be constructed of full size rather than of smaller size at first to be supplemented later by another. Comparing the estimated cost of this development with that of the complete Catskill plan, it is seen that the Catskill estimate calls for \$161,857,000 to supply 500,000,000 gallons per day or 32 cents per gallon, while the total Long Island estimate as given above requires but 19 cents per gallon. The cost of the first five years' work, however, yielding 70,000,000 gallons, is almost the same as that of the Catskill supply. For this reason, as well as for the larger base of supplies afforded, the engineers would prefer to commence the Long Island project at once and carry it along in stages simultaneously with the Catskill work instead of completing the latter first.

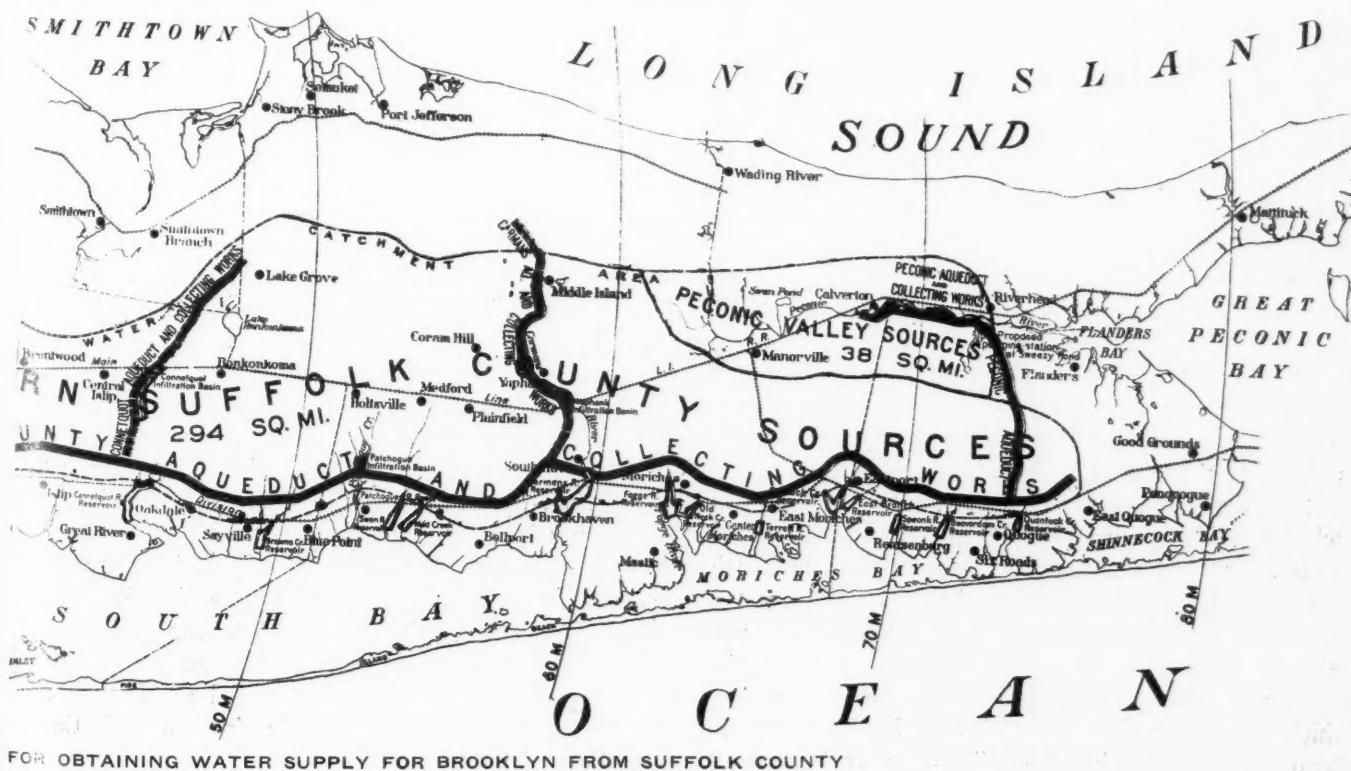
The urgency of this Long Island development is indicated by the fact that sea water has already entered some of the ground-water collecting works in Queens and Nassau counties supplying the Borough of Brooklyn, showing that the sources are being overdrawn in years of low rainfall. The full capacity of the present watershed on Long Island is 170,000,000 gallons per day, except in very wet years, and this is Brooklyn's

estimated consumption in 1910. Although plans now under way call for the delivery of some of the Catskill water to Brooklyn and Queens county, yet it seems probable that all of that supply which can be delivered through the present Croton system will be needed for the Boroughs of Manhattan and the Bronx. Thus the other sections would receive no benefit until 1915, the year of final completion of the Catskill aqueduct, and long after their consumption at the present rate of increase would exceed the supply. In view of this imminent shortage, construction will be commenced on Long Island immediately after the plan has received the formal approval of the State Water Board.

Filtered and Softened Water Costs More

IN our issue of September 9 some figures were given concerning the Columbus, O., water works. A few days after this Prentiss R. Crall, Cashier of the Department, presented to the Public Service Board a recommendation that the meter rate be doubled next year, accompanied by some figures. As stated in our previous article, the cost of pumping has increased from \$9.76 in 1902 to \$11.32 in 1906, falling to \$10.20 last year. The revenue per tap, however, was \$13.81 in 1902, but by 1907 it had fallen to \$8.55. With the added cost of purifying and softening the water the cost will be increased; while with the increasing use of meters the private consumption per tap will probably decrease. The result will be inability to meet fixed expenses.

The rate was 20 cents per 1,000 gallons from 1871 to 1891, when it was changed to 6 cents. In 1902 it was raised to 8 cents. During this time there were various special rates for large quantities. It is proposed to make the rate 16 cents per 1,000 gallons, with a minimum of either \$5 or \$6, when the purified water is furnished.



GARBAGE DISPOSAL AT CLEVELAND

Improved Dryer Recently Installed and New Percolator Invented
by Superintendent Peck—Collecting and Transporting
Garbage—Cost of Operation—Revenue

W. J. SPRINGBORN, President of the Board of Public Service of Cleveland, O., on February 11 read before the Civil Engineers' Club of that city, a paper describing quite completely the method of disposing of the city's garbage. The disposal plant was described in our issue of February 13, 1907. This paper, however, gives some more recent data concerning the plant.

The wagons used for collecting the garbage carry a steel box which holds about 3,500 pounds of garbage. This is hinged to the bolster over the rear axle to permit of dumping, but is not self-dumping, this being effected by attaching chains to the front of the box and raising this sufficiently by means of a block and tackle. The wagons are equipped with canvas covers, which are less noisy than the iron ones. In these carts the garbage is carried to a loading station about three-quarters of a mile from the center of the city, where it is dumped into railroad cars, of which the city owns ten. These are constructed of steel throughout, the body of the car being a tank semi-cylindrical in shape and 30 feet long, which is supported by trunnions at each end and also by rollers at three different points underneath. The capacity of a car is 40 tons. In unloading the cars, cables are passed underneath the body and fastened on a point at the far side about half way down from the top; two men then tip the car body by means of the cables and two five-ton triplex blocks and the garbage falls upon the floor of the receiving building.

The drying of the solids remaining in the digester is effected at present by apparatus which is believed to be an improvement over that described in our previous article. They are first put into a steam jacketed dryer 14 feet long and 5 feet in diameter, and having a shaft through its center with paddles attached. As the shaft rotates the paddles lift the material, breaking it up and facilitating the evaporation of the moisture. This type of dryer is equipped with two manholes underneath it, through which the material is dropped into a conveyor and carried to a combination steam and hot air rotary dryer which is the invention of E. S. Peck, Superintendent of the plant.

The cylinder of this dryer is 30 feet long and 57 inches in diameter, with a two-inch space between an inner and outer shell for the admission of steam. There is also a 14-inch steam pipe running through its center. To the sides of the inner shell are attached flights four inches in width. These lift the material as the dryer rotates. The dryer is set on a grade of about one-fourth of an inch per foot and the tankage is fed in at the upper end and discharged at the lower, the process being a continuous one. At the lower end of the dryer is a series of steam coils with a blower attached which forces the air around these coils, heating it to about 230 degrees Fahrenheit. This dry air then passes

through the dryer, absorbing the moisture from the tankage as it passes from the flights above referred to.

The article concerning this plant above referred to described the percolator then in use. The removal of the material from the percolator and replacing the small perforated plates and pipes through which the grease escaped involved considerable time and labor. Mr. Peck has invented a new type of percolator which is expected to overcome these objections and at the same time greatly reduce the loss of naphtha and leave the material much drier. This percolator is similar in design to his dryer just described, except that it is only 14 feet long and 8 feet in diameter. It is placed in a horizontal position, has a steam jacket, and is constructed to rotate in the same manner as the dryer. The material is put into this percolator through two manholes in its upper side. The pipes for the admission of gas are also connected through the covers in these manholes. The grease and naphtha escape through three openings in the lower part of the tank, and in order to hasten the process of percolation the pipes can readily be disconnected and the percolator rotated so as to mix thoroughly the entire mass of material with the naphtha or other solvents used.

In order to recover the naphtha after the grease has been extracted, steam is turned into the drum and jacket and the percolator is made to revolve, thus moving the material sufficiently to release quickly all of the solvent contained in the tankage, at the same time heating it. By this method no moisture is added to the material nor steam mixed with the vapors, which go to the condenser and thence to the storage tank. By the use of this type of percolator it is believed that the loss of naphtha will not exceed one gallon per ton of material treated, in place of the 2½ gallons by the present method.

In the old process grease was extracted by hydraulic presses as described in our previous article. The tankage produced by this method is not as desirable to the trade as that obtained by the new process. The latter leaves about 2 per cent. of grease in the tankage whereas the former left 12 per cent.; and grease being the more valuable part of the product it is desirable to recover as large a percentage as possible.

During 1907, 37,606 tons of garbage were collected, the cost of collection and reduction of which was \$193,365.76. The gross income from the sale of products amounted to \$136,985.60, leaving \$56,380.16 apparent deficit. Prior to 1905 the garbage had been collected and disposed of under private contract for \$69,400 a year, at which time the works had a capacity of 110 tons a day. The quantity collected now is about 50 per cent. greater than then and the cost of collection and disposal by private contract would consequently be greater, in all probability. It would, therefore, appear that in reality the plant is at least paying for itself. Whether or not this is the case, however, the Board has felt that the work of collecting the garbage is such an important one as to require special effort to keep the service on the highest possible plane of sanitation, regardless of its cost.

The city is divided into 67 routes, using in all about 80 wagons and 110 horses. The receipts from the sale of by-products have increased from \$65,881.14 in 1905 to more than double this in 1907; not all of this increase being due to the larger percentage of grease and tankage recovered, but in part to better market prices.

MUNICIPAL STREET RAILWAYS ABROAD

SEVERAL United States consuls have recently reported concerning municipal street railways in Huddersfield, England, Belfast, Ireland, and Manchester, England. The first named city has a population of about 100,000 and is believed to have adopted municipal ownership more completely than any other city in England. Its street railway contains a little over 28 miles of track, more than eight of this being double track. Of 70 cars, each seating 56 passengers, 56 are ordinarily in use. The average fare last year was 2.4 cents, varying from two to eight cents, depending upon the distance. The total number of miles run in 1907 was 1,960,329, and 16,130,334 passengers were carried. The 430 regular employees received \$2,239 weekly, for nine-hour days. The permanent way has cost \$984,167 and the permanent works, cars, etc., \$2,009,383. The total working expenses last year averaged 8.7 cents per car mile. After paying interest on capital, sinking fund and depreciation, a net surplus of \$31,700 was turned into the treasury.

The act of Parliament under which Belfast acquired its street car system, provided that it must be self-supporting, no money being appropriated to it from any other fund. When electric traction was introduced, December 5, 1905, a new schedule of fares was established. A circle of one mile radius was assumed, taking as a center the center of the city which is the junction point for all car lines. The fare was fixed at two cents within this circle and four cents to any point beyond the mile radius; a universal two-cent fare being charged up to 8 A.M. to accommodate workmen. These rates have recently been found not to afford sufficient income to meet expenses, and in July last a revised scale was put into operation to remedy this.

In Manchester the earnings for 1907-8 showed an increase of \$20,742 over those of 1906-7. The balance of revenue over expenditures was \$714,880, being \$685 less than the previous year. Of this balance, \$427,230 was appropriated for renewal and depreciation account, \$19,992 was appropriated to street improvements, etc., and \$267,658 was turned into the city treasury. The receipts per car mile were 21.52 cts., which was 0.52 cts. less than the year before, the decrease being attributed to bad weather. There was also an increase in working expenses caused largely by the greater amount of damages paid to persons injured on the cars, and also to an increase in the cost of maintenance of the permanent way. Here also a new system of fares had been adopted and proved a success. These vary from one to eleven cents, 67.82 per cent. of the receipts being from two-cent fares. In both Belfast and Manchester there are cross-town penny stages carrying passengers across the general direction of the railways.

MUNICIPAL OWNERSHIP IN GERMANY

RECENT statistics show that, in the 58 cities of the German Empire containing over 50,000 inhabitants, the leading utilities are owned and conducted by the municipalities to the following extent:

Public Utilities.	Number of Cities.	Public Utilities.	Number of Cities.
Gas works	44	Removal of garbage and sewage.....	56
Electric power plant...	38	Market halls.....	16
Water works.....	43	Tenement houses (chiefly for municipal employees and laborers)	22
Abattoirs	47		
Bathhouses	42		
Street railroads.....	10		

Of these, the gas works have made the best financial showing, their total profits amounting annually to \$10,100,000; of which, however, \$2,500,000 is required for interest on the investment. Electric works show a profit of \$4,200,000, less \$1,300,000 for interest. Water works return an average of 8.5 per cent. of the capital invested. Market halls and tenements yield but little profit.

It is estimated that nearly \$1,000,000,000 is now invested in public utilities by German municipalities. In general, municipal control is established only when there is simply a choice between a public and a private monopoly, as in the case of gas, water, electricity, etc., or else when the desirability of a utility is unquestioned, but the uncertainty as to profitable returns fails to attract private capital.

The telegraph and telephone in Germany are owned and managed by the Imperial Government and most of the railway lines are the property of the different States.

WINNIPEG MUNICIPAL ASPHALT PLANT

THE city of Winnipeg, Man., Canada, has operated a municipal asphalt plant since 1899. The plant has twice burned and each time been enlarged in rebuilding and at present represents a capital cost of about \$59,000. This plant is used for all asphalt paving done in the city, both new and repair work. The cost of new work, not including 20 cents per yard for guarantee fund, is about \$2.25. This includes an average thickness of concrete of about 5 inches, a binder of 1½ inches and a top surface of 1¾ inches.

Beginning with 48,188 square yards of new pavements laid in 1899, the amount of work done by the plant has increased more or less uniformly until last year 151,150 square yards of new pavements were laid and 12,953 square yards of repairs. The costs of construction were: Concrete, per square yard per inch thickness, 15 cts.; binder in place, 30 cts.; top surface, per square yard, 65 cts. This gives the actual cost of construction with five inches of concrete as \$1.70 per square yard. Materials cost at Winnipeg as follows: Sand, \$1.20 per cubic yard; broken stone, \$1.30 per cubic yard; asphalt, \$25 to \$30 per ton; petroleum residuum, \$24.55 per ton, with duty. The Superintendent receives \$6 per day; general and street foremen, \$3.50 per day; sub-foremen, \$3 per day; skilled labor, \$2.50 per day; ordinary labor, 20 cts. per hour; teams, 50 cts. per hour. Coal costs \$6.50 per ton.

CHOKED SEWERS IN DAYTON

FOR a considerable time certain of the streets of Dayton, O., have been flooded on the occasion of every heavy rain, in spite of what was supposed to be an excellent system of storm sewers. With a view of remedying this, City Engineer Cellarius had an investigation made of the condition of the sewers and it was found that many of these were half filled with deposits of mud and gravel. This diminished the carrying capacity of the sewer, both directly by reducing the size and because the friction of the water over the deposit was greater than it would be over the smooth surface of the pipe. One seven-foot trunk sewer was found to contain over four feet in depth of deposit, and eight wagon loads of material were removed from an 18-inch sewer between two consecutive manholes. The cause of the filling of the sewers is believed by Mr. Cellarius to be the fact that catchbasins were not provided at the street inlets. Dayton lies in a valley and many of the streets having considerable grades are unpaved. The soil is very gravelly and a great deal of such material is washed down the street in times of heavy rain storms and carried into the sewer.

After finding by preliminary inspection that some, at least, of the sewers were badly clogged, Mr. Cellarius decided that a general survey of the storm water system was necessary, and such was carried out under his direction. Measurement of the depth of deposit at each manhole was taken throughout the entire system and noted on a map of the sewers, and city employees passed through the entire length of several miles of large sewer. From this survey it was found that at least twelve miles of sewers needed cleaning and Council was asked to provide \$15,000, the estimated cost of the necessary work. The city itself did some experimenting in methods of sewer cleaning, and on September 4 let a contract for cleaning three miles of sewers. Under the direction of the Engineer's office, W. H. Stewart used his apparatus in cleaning certain of the sewers and the work was said to have been entirely successful, although no data of amounts or costs could be obtained. In the cleaning of the sewers, stones, from the size of a baseball to the finest sand, were removed. In numerous places poplar roots were found which had grown into the sewer through small openings. The smaller sewers were cleaned by hand, but either horse or steam power is required for the larger ones. The deposits are removed by means of metal buckets pulled through the sewer from manhole to manhole by cables. The cost of the work could not be ascertained.

It is the intention of the Engineer to build catchbasins wherever necessary after the sewers have been cleaned. It is proposed to carry the basin connection pipe into the inside of the catchbasin and there have a bend and an arm extending a short distance downward, the idea being that if the deposit is allowed to accumulate until it reaches the opening at the bottom of this inner arm no water can escape but the basin will overflow into the street, thus giving warning that it needs cleaning. If a simple opening, even with an outside trap, were used, it is feared that, if the basin

were allowed to fill with gravel through carelessness, this would be carried into the sewer. It is thought that this syphon form of outlet will prevent such escape of the gravel.

COST OF FIRE PROTECTION

MR. H. M. WILSON, Chief Engineer of the Technologic Branch of the U. S. Geological Survey, has sent to engineers and superintendents of water works plants throughout the county the following letter, which is self-explanatory, and which is referred to in the editorial column:

DEAR SIR: In connection with its structural-materials investigations this Survey is obtaining information regarding losses of such material by fire, an inquiry made in behalf of the Conservation Commission recently appointed by President Roosevelt. Data showing the additional cost of city water supplies needed for fire protection beyond what is necessary for domestic uses are also desired, and I hope that you will lend your cooperation by answering the questions in the accompanying schedule, either for your own city or for some city concerning which you have definite engineering information.

If you so desire, this information will be treated as strictly confidential, and only total figures, combined with those of other cities, will be made public.

Very respectfully yours,

H. M. WILSON,
Chief Engineer, Technologic Branch.

RETURN THIS SHEET TO THE U. S. GEOLOGICAL SURVEY,
TECHNOLOGIC BRANCH

1. Name of city.....State.....
2. Population.....Year, 190.....
3. (a) Total estimated cost of distributing system, \$.....
- (b) Number of feet of various sizes of pipe in distributing system or tons of metal in same.....
- (c) Estimated cost of distributing system if necessity for fire service were omitted and only domestic supply required, \$.....
- (d) Weight of metal under same conditions, tons.
4. (a) Total estimated cost of water supply, by pumping or reservoirs and gravity flow, for above distributing system, \$.....
- (b) Estimated cost for domestic requirements only (see 3 c), \$.....
5. (a) Total number of fire hydrants in your system (3 a),
- (b) How many could be dispensed with (see 3 c)?.....
6. If you have or contemplate a separate high-pressure fire system, what is its estimated value? \$.....

The above data may, if you prefer, be given on the basis of cost per capita for each item.

(Signed).....

Address.....

.....1908.

Investigation of Oyster Beds

THE investigation of the oyster beds of New York State now being conducted by the State Department of Health in cooperation with the Forest, Fish and Game Commission, is being prosecuted vigorously. A laboratory has been established in the Brooklyn Polytechnic Institute and has been put in charge of the chief chemist of the State Hygienic Laboratory. Three assistants are associated with him, and many samples of water and shellfish from numerous points on Jamaica, Princess and Raritan bays have already been investigated. A sanitary survey, including the condition of the shores and neighboring lands, the degree of pollution of streams and inlets, etc., has been made of the eastern end of Long Island, Great South Bay, and a considerable portion of the north shore of Long Island. An investigation of Princess Bay and Jamaica Bay is under way.

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Readers are invited to contribute to the MUNICIPAL JOURNAL AND ENGINEER, either in the form of special articles or of letters discussing matters of current interest.

It is also desired that the facilities furnished by the reference library in this office should be widely known and freely used by those interested in municipal affairs. Visitors will be welcomed and provided with conveniences for search, and inquiries by mail will be promptly dealt with.

SEPTEMBER 23, 1908

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Cost of Fire Protection

It is a fact which has frequently been alluded to that the increased size of mains and storage, together with the fire-hydrants and connections, required for furnishing fire protection, over and above what would be necessary if domestic consumption only were provided for, adds very materially to the cost of a water works system. A few attempts have been made to express this in dollars and cents, but the number of such calculations which have been made public is very small. The importance of this matter has been largely overlooked in the past, but has always been considerable and is increasing with the introduction of improved methods of bookkeeping into both municipal and private plants.

Students of the subject agree that the finances of the Water Works Department should be kept entirely separate from other city accounts, and that the Department should be compensated for services rendered the city. This includes fire protection, and payment for water actually used for this purpose would be ridiculously inadequate recompense—a principle which has been upheld by the courts. The only just basis for calculating this indebtedness would appear to be the expense involved in furnishing such protection. Quite a number of cities turn over to the Water Departments sums aimed to conform to this idea, but these are in most cases based upon a certain rate per fire hydrant, such rate being what some nearby cities are paying to private companies. Fire hydrant rates throughout the country vary from nothing to \$100 or more per hydrant, and the method of fixing the rate has in probably no case been based intelligently and solely upon the idea above referred to. In some cities hydrants are furnished free as a payment for the franchise, and in many this idea has undoubtedly had its effect in determining the rate. In others, the water company has fixed the hydrant rental at such a rate as to pay it say 4 per cent. interest on the cost of the plant (the city thus practically guaranteeing this return on the investment) as a condition of building the plant at all. In the case of private companies these methods of calculation may serve every necessary purpose; but for estimating the payments to be made to a municipal plant a more scientific one should be adopted.

On another page will be found a request by the U. S. Geological Survey for just such information as would seem to be necessary for this purpose, although its aim in collecting the data is to learn the cost of fire protection in American cities, in connection with its study of the conservation of national resources. Furnishing the information desired will involve a considerable amount of investigation and labor on the part of water works engineers and superintendents, but we hope it will be furnished by all who possess the knowledge enabling them to calculate the indicated quantities and sums. In doing so an official will not only assist this particular investigation, but the information will be of the greatest value in demonstrating to the public—and possibly to himself—how large a proportion of the cost of a plant is chargeable to the public service rendered by it in the form of fire protection.

Typhoid Fever in Washington

It probably no city of this country has the medium of typhoid fever infection so defied all efforts for its suppression or even discovery as in Washington, D. C. During the week ending September 12, 39 new cases were reported and 5 deaths, or at the rate of 260 deaths a year. For many months an approximately similar rate has been maintained, in spite of determined efforts to reduce it. That the disease should be endemic to this extent in the capital of the country, and with no improvement in sight, may not perhaps be termed a disgrace, but is certainly remarkable.

IRRIGATING WITH SEPTIC SEWAGE

FRESNO, Cal., a city of 30,000 population in the San Joaquin Valley, has been operating for almost a year a sewage disposal plant in which the effluent from a septic tank, partitioned off into eight sub-tanks, is used for irrigating about 800 acres under a ten-year contract with private parties. The land belongs to the city and the lessees agree to take care of all the effluent upon the land in a sanitary manner and to pay to the city during the ten years a rental, totaling \$53,000, the annual amount increasing from year to year. An option is given for renewing the lease for a second ten-year period at a rental of \$9,000. Fresno is fortunately located in a district where irrigation is necessary for any kind of farming and water, whether it contain fertilizing matter or not, is of considerable value. It would seem as though all the cities in the irrigation countries of the west could dispose of their sewage in this way to a financial advantage.

Each of the eight compartments of the septic tank is 36 feet wide and 90 feet long and 8 feet deep. The tanks are built of hard burned brick and each is covered with a wooden roof. The capacity is designed to give a storage of eight hours flow. The effluent is aerated by falling a few inches over a weir extending the entire width of the tank before passing to the irrigated farm. This septic tank cost \$17,300. The farm, which contains 812 acres, cost \$31,500, and the preparation of it for irrigation cost \$22,500.

The plant was designed by and constructed under the supervision of George L. Hoxie, City Engineer.

CITY'S INDEBTEDNESS FOR WATER

THE Gloucester, Mass., Water Department has been compelled to issue bonds each year since 1903 because of the failure of the city to pay the bills which have been submitted to it for water used, but which have been paid in part only. At the beginning of 1907 the city was indebted to the Department \$23,627.97; and this was increased during the year by \$19,500, the estimated value of the water used by the various buildings and departments, while but \$7,525 was paid on account. This compares very unfavorably with the total amount of private bills uncollected—\$622.02.

OWNERSHIP OF SERVICE PIPES

At the request of a member of the American Society of Municipal Improvements, inquiries were sent recently to a number of cities in an effort to learn the ordinary practice with reference to water works service pipes. Thirty replies were received, and are arranged geographically in the table below. Nine of these were private plants, and in all but one of these cases the service pipes were reported as belonging to the property owner. Municipal plants are considered to own the services in nine of the twenty-one cases. In four cities having municipal plants the city pays for the services. In all other cases, whether with municipal or private plants, the property owner pays. In ten cases, the charge for a service is regardless of its length; in four it is at a fixed rate per foot; and in ten, the actual cost to the city or the plumber's bill is paid by the owner, plus a fixed sum for tapping the main in some cases.

SERVICE PIPES FROM WATER MAINS

CITY	To Whom Does the Service Pipe from Mains to Curb Belong?	Who Pays for its Installation?	On What Basis is the Charge for Service Made?	Municipal or Private Plant
Portland, Me.	Water Co.	Property owner	Charge uniform for all services.	Private.
Haverhill, Mass.	"	"	Actual cost.	Municipal.
Holyoke, Mass.	City	"	Size of service pipe, regardless of length.	"
Newton, Mass.	"	City	Fixed rate per foot inside curb.	"
Somerville, Mass.	"	Property owner	"Fixed amount for a service pipe—extra length by the foot"	Municipal.
Pawtucket, R. I.	City	City	"	"
Woonsocket, R. I.	"	"	"	"
Bridgeport, Conn.	Property owner	Property owner	Charge by the foot.	Private.
Troy, N. Y.	"	"	Actual cost to city.	Municipal.
Hoboken, N. J.	"	"	Standard price for all lengths.	Private; mains belong to city.
Passaic, N. J.	"	"	According to length and character of soil.	Private.
Bayonne, N. J.	"	"	Uniform charge of \$2 for tap.	Municipal.
Erie, Pa.	City	City	No charge to and including curb cock.	"
Reading, Pa.	Property owner	Property owner	Actual cost.	"
Charleston, S. C.	"	"	Fixed sum, regardless of length (a).	Private.
Birmingham, Ala.	"	"	Pays plumber's bill.	"
Grand Rapids, Mich.	"	"	Pays plumber's bill; \$2.50 for tap.	Municipal.
Oshkosh, Wis.	"	"	Charge by the foot.	Private.
La Crosse, Wis.	"	"	Pays plumber's bill; nominal charge by city for inspection.	Municipal.
Akron, O.	" (b)	"	Charge by the foot, plus fixed price for tap and curb box.	Private.
Youngstown, O.	"	"	Pays plumber's bill.	Municipal.
Ft. Wayne, Ind.	City	"	Uniform charge, regardless of length.	"
South Bend, Ind.	Property owner	"	"	"
Joliet, Ill.	City	"	" " " " (c)	"
Rockford, Ill.	Property owner	"	"	"
Dubuque, Ia.	"	"	Uniform rate for all services.	"
Sioux City, Ia.	"	"	"	"
Lincoln, Neb.	"	"	"	"
Salt Lake City, Utah.	City	"	Charge is same for all services.	"
Butte, Mont.	Property owner	Property owner	Pays plumber's bill.	Private.

(a) Previous to this year owner paid actual cost. (b) Suit now being tried to determine whether private company can shut off water at curb cock owned by consumer. (c) Laid same time as mains; all paid for by special assessment.

NEWS OF THE MUNICIPALITIES

Divers Subjects of General Interest and Their Treatment by City Councils and Officials—Streets, Water Works, Lighting and Sanitary Matters—Police and Fire Items—Government and Finance

ROADS AND PAVEMENTS

Civic Asphalt Plant Closes Season's Work

Columbus, O.—The municipal asphalt repair plant is closing up its season's work, having finished up all work on asphalt streets not too far gone to make repairing unprofitable. The streets remaining in bad shape are the ones which the Service Board will resurface throughout. More than half of the season's work was put in on North High street, five miles long. The repair crew also fixed up State, Pearl, Seventeenth and Eighteenth streets, as well as some blocks on the East Side. The repairing has not cost the property-owners any money directly. The plant was maintained by receipts from the sale of vehicle licenses. In resurfacing, the city pays for intersections and half of the balance, the other half being paid by the property-owners.

Municipal Asphalt Plant Poorly Located

Dayton, O.—City officials are endeavoring to save an item of \$500 a month charged to the cost of operating its asphalt plant, owing to its location at a considerable distance from any railroad siding. Superintendent McCurdy Hoffman would like to have a track run from the C., H. & D. Railroad down the river levee to the yards, but the city wants to use the river front for park purposes and the plan will not be adopted. President J. C. Ely, of the Board of Public Service, thinks it would be best for the city to sell its present yards and get one nearer the railroads, thus cutting out this expense.

Engineer Installs Testing Plant

Pasadena, Cal.—City Engineer S. J. Van Ornum is equipping a laboratory for testing paving material. Glen Price, formerly assistant at Los Angeles for the New York Testing Laboratory, will be employed to do the chemical work. A large part of the work will consist in testing bitumens in rock asphalt pavements and oils designed for use in highway work. After the laboratory has been in operation for some time and data have been collected, it is believed that the specifications for paving can be improved and made more definite so as to lead to a better quality of work.

Movement for New Sidewalks Inaugurated

Pensacola, Fla.—A movement for a better system of sidewalks throughout the city has been started by Mayor C. C. Goodman, who, in a message to Council, suggested that advantage be taken of a clause in the city code which gives the Board of Works the right to have walks constructed and repaired and issue lien warrants against the property in payment. Accordingly, the City Engineer was instructed to draw up plans and specifications for ten miles of walks so that citizens might have the advantage of low prices, such as can only be secured at a large letting and of competent supervision by the Engineering Department.

Municipal Asphalt Plant for Wilkes-Barre

Wilkes-Barre, Pa.—The Street Committee of Wilkes-Barre has directed City Clerk Fred H. Gates and Street Commissioner Barrett to place themselves in communication with various municipalities and ascertain the cost of erecting and maintaining a municipal asphalt plant. This subject has been discussed for several years. In view of the fact that the streets of the city are in a worse condition at present than they have been for years, the committee feels that it will be much cheaper to erect a plant than to spend so much money in advertising for bids and having the work done by outside asphalt companies.

Projected Boulevard to Be Unrestricted Highway

St. Louis, Mo.—The Board of Public Improvements has abandoned the original plan provided in a bond issue for the opening and widening of King's Highway as a boulevard and has taken steps to make it an unrestricted highway. The original plan would have cost about \$15,000,000, or about thirty times the bond issue provided for the work. The balance of the expense can be raised by an assessment against the property in the district if the boulevard plan be abandoned, but the law covering the condemnation of ground for a boulevard is different from that covering an unrestricted highway. For a boulevard, the special charter of the city limits the assessment to property immediately adjoining the highway. The widening of the highway leaves very narrow strips at some points where nearly all of adjoining building lots are taken for the street and the assessment would be confiscatory. The highway will be practically the same as it was to have been as a boulevard, except that there will be neither business or building restrictions. It will be nearly thirty miles long and will connect with nearly all of the public parks in the north, west and south of the city.

Boulevard Plan Popular

Salt Lake, Utah.—Action was deferred by the Council Engineering Committee on three petitions for paving on account of a serious problem of maintenance which has arisen. It seems that all the property-owners desire that the streets be boulevarded with a 24-foot driveway on each side. The question is whether the city will be compelled to care for these boulevards. This is the case at present on Sixth East, and should the boulevard scheme be extended it would in the end become a considerable burden. The members of the committee realize that the grass plots in the center add greatly to the attractiveness of the drive and will endeavor to formulate some plan whereby the city and property-owners may divide the cost of maintenance.

Ocean Boulevard in New Jersey

Trenton, N. J.—At a dinner to be given in New York, after the Election, Governor Fort will inaugurate a movement for a system of State highways on a plan similar to that adopted by the State of New York. The amount of money spoken of as required for the work is \$10,000,000 and the question will be submitted to a vote of the people. The principal road in the system is to be an ocean-front boulevard to be built from Atlantic Highlands to Cape May. Another great proposed route will be from Cape May along the Delaware up to the northern end of the State. A third great route would run from Jersey City through Newark to New Brunswick, Trenton and Camden. Mayor T. Frank Appleby, of Asbury Park, has already called for a conference of municipal officials of Monmouth County, requesting them to meet and form plans to promote the Governor's project.

Boulevard Between Pacific Coast Cities

Tacoma, Wash.—T. H. Bellingham, former Councilman, has a plan for a Tacoma-Seattle water-view boulevard which he is taking up with the Good Roads and other associations. The road would run along a series of bluffs which afford a wonderful site for a boulevard. As for the practical plans, it is believed that property-owners would be glad to donate the rights-of-way. The cost of construction would be met, partially, at least, by popular subscription.

SEWERAGE AND SANITATION**Septic Tank Causes Complaint**

Iola, Kan.—Owing to complaints and threats of damage suits on account of bad odors arising from the septic basins, the city's disposal system will have to be reconstructed. It seems that there is some interference with the sewage flow and a disturbance of the normal conditions. Just what the trouble was Dr. Glynn, who made the report to Council, said he did not feel competent to say, but he was sure the city needed the services of a sanitary engineer, as it might have an expensive proposition on its hands and should proceed with caution.

Shortage of Sewer Pipe Delays Work

Knoxville, Tenn.—Sewer work is being delayed in the city on account of the shortage of sewer pipe. The pipe is purchased through local firms, but they cannot secure the pipe from the factory. Paving work of the largest contractors, the Barber Asphalt Paving Company and the R. S. Blome Company, as well as that of smaller contractors, is being delayed through the inability to complete the storm-water sewer work. Much the same condition of affairs occurred last year.

Model Milk Ordinance

Muncie, Ind.—Dr. Will Kemper, Secretary of the City Board of Health, has received from Dr. J. N. Hurty, Secretary of the State Board, an ordinance that it is proposed the City Council shall enact, and which is designed to be the model milk and dairy ordinance of the State. It is understood to meet the exact ideas of the State Board as to the proper methods of operating dairies and distributing milk so that the health of the community may never be endangered from this source. The proposed ordinance provides for the licensing of every person that sells milk; that certificates shall be issued to dairymen by the City Board of Health, showing that the dairies have been found in sanitary condition and the cattle free from disease; for the inspection twice each year by a veterinary surgeon of every milch cow the product of which is sold; for the renewal of licenses annually; for the revocation of any license at any time the City Board of Health determines that a dairyman is not living up to the rules of the Board and the ordinance; for the permanent disability of any dairyman again to enter into the business in this community once his license is revoked; for the appointment of a Milk Inspector, who shall give his entire time to the enforcement of the Board of Health rules.

Cave-in of Sewer Causes Complaint

New York, N. Y.—Owing to the caving in of 200 feet of the 15-foot sewer from Southern Boulevard to Hunt's Point, the Bronx, the Sewer Department has found it necessary to divert the sewage into Hunt's Point Park temporarily, and residents of the vicinity are complaining of the condition. A few seconds before the sewer caved in a heavy dirt train, which was part of a road-making equipment, passed over the spot.

Trunk Sewer Plans Progress

Plainfield, N. J.—Substantial progress has been made in the plan suggested by Mayor Charles J. Fisk for a trunk sewer for the towns of Plainfield, North Plainfield, Dunellen, Bound Brook, and possibly New Brunswick, Somerville, Raritan, Scotch Plains and Fanwood. The special Sewerage Commission has held a meeting, attended by Commissioner Herbert, of the State Sewerage Commission, when approximate figures were presented showing the probable cost of investigation, together with a plan showing the most desirable location of sewage beds. The cost of making surveys and plans was placed at \$2,000 and the towns interested will make appropriations to cover it. As to the location of beds, a site in Middlesex County, below Riverside Park, has been suggested.

WATER SUPPLY**Tests to Control Flow of Ohio River**

Cincinnati, O.—The first measurements of the kind ever attempted in Cincinnati have been taken from the suspension bridge to determine the volume of water flowing in the Ohio River, by first ascertaining the velocity of the current. The work is being carried on under the direction of Engineer A. H. Horton, of the water resource branch of the United States Geological Survey. The work is to determine the feasibility of a general reservoir system at the headwaters of the streams for controlling the flow of water.

First Report of Municipal Water Works

Franklin, Pa.—The first report of the Water Committee to the City Council shows that the plant yielded a good net revenue during the first month-and-a-half it was owned by the city. The receipts during that period were \$3,044.87 and the expenditures, not including coal, \$996.15, leaving a balance of \$2,048.72. The coal bills will amount to about \$350.

New Mains Greatly Increase Water Pressure

Hoboken, N. J.—Water Registrar Gustav Bach is enthusiastic over the increased water pressure since the new big mains were laid. Before the pipes were laid, the average pressure was fifteen pounds to the square inch in the daytime, while a chart recently made shows a pressure of forty to fifty pounds during the day, while the record in the evening is as high as sixty pounds. A material reduction in insurance rates is expected.

New Residences to Be Connected with Mains

New Orleans, La.—Superintendent George G. Earl, of the Sewerage and Water Board, has prepared a circular for the general information of the public, with reference to the cost of connections, etc., to sewer and water mains. The circular states that the Board has authorized the making of connections to the new water mains where pressure is available. Where new houses are being built and the owners desire to save the cost of construction of cisterns, they are to file application through the plumber on blanks that will be prepared. The applicant over his signature is to state that in having the connection made at this time the connection will be at his own risk, as to interruption in the service, or decrease of pressure until such time as the new water works system is completed and put in full and regular operation.

Municipal Water Supply Considered

Pasadena, Cal.—The question of issuing bonds for the purpose of acquiring and improving water supplies is complicated by the possibility of purchasing water from the Owens river project of the city of Los Angeles. Engineer Mulholland, in the course of evidence given in a lawsuit, testified that water from the Owens river would cost Los Angeles about \$2,000 a miner's inch, delivered in that city, and about half that sum at San Fernando, the point from which it might be taken to Pasadena. Estimates of the cost of supplies now used, or which may be developed, vary, with the preponderance of evidence seemingly in favor of an independent supply.

Pipe Line Poor and Expensive

Perth Amboy, N. J.—The city is in danger of a water famine owing to the bad condition of one of the mains supplying the city with water. The larger one of the pipes, a 24-inch, is in fairly good condition, but the other, a 16-inch, has been gradually eaten away by the acid from factories in the meadows where the pipe is laid, until it has become so weak that breaks frequently occur. During the last six months twenty leaks have been found and repaired, the cost of the work amounting to \$800. If the larger pipe should break it could hardly be repaired before one of the usual breaks occurred in the smaller one.

Pittsburg Water Matters

Pittsburg, Pa.—The failure of the Pittsburg filtration plant to do the amount of work expected of it has forced the officials to a consideration of a meter system. The condition of things in Cleveland is being investigated for purposes of comparison. In Pittsburg the consumption per capita is 220 gallons per day; in Cleveland, with a good meter system, it is 100 gallons per day. Assistant Engineer E. E. Lampher, of the Bureau of Water, of Pittsburg, visiting Superintendent E. W. Bemis, of Cleveland, stated that the filtration plant just installed at a cost of \$7,000,000 is filtering only 50,000,000 gallons per day, whereas it was expected to handle 100,000,000 gallons. The reasons for the failure are the action of the scum on the sand filter and the cleaning of the sand. The machinery installed for the purpose of cleaning the sand does not do the work effectively at present, and for that reason the sand must be cleaned by hand. An expenditure of \$1,000,000 more, it is expected, will bring the filters up to their estimated capacity. Superintendent Bemis estimates, on the basis named by Lampher, that the plant would cost \$11,000,000 or \$12,000,000 before Greater Pittsburg is cared for. "While the great cities of Europe are using the sand filtration system successfully, it must be remembered that the Pittsburg water supply is much worse than theirs to begin with," said Superintendent Bemis. "Cleveland will install a mechanical filtration plant when filtration is considered advisable. It is not as expensive as the sand system."

Committee Favors Artesian Supply

Piqua, O.—A report on water supply made by committees appointed by the Piqua Club, the Business Men's Association and the Trades and Labor Council, is to the effect that water from the ponds now used is not fit for drinking purposes. To protect the water sheds that supply this water it would be necessary to buy or lease the land from which this surface water drains into these ponds and this is pronounced too expensive and impracticable. The opinion was also expressed that the water was too impure to be purified by filtration. Nevertheless, it was recommended that these supplies be not abandoned. It was recommended that the supply from artesian wells be increased at once by sinking new wells and introducing improved pumping machinery.

STREET LIGHTING AND ELECTRIC POWER

Borough Would Own Gas Plant

Avalon, N. J.—The members of City Council are considering the project of installing gas in the resort. The body is to visit Woodbury shortly and look over the lighting system in vogue there, with a view of establishing such a plant in Avalon. The borough owns its water works and has for the past seven years. The works have not only paid, but have been a source of the greatest satisfaction and it is figured that a lighting plant can be installed in the same building with the pumping works. The lighting system used at present is the Welsbach gasoline lamps.

Power Canal from Lake Erie to Lake Ontario

Buffalo, N. Y.—A corporation has been organized to build a power canal from South Buffalo, on Lake Erie, to Lake Ontario. The purpose and scope of the work are similar to those of the Chicago drainage canal. It will provide an outlet for sewage which now contaminates the water supplies of Buffalo, Tonawanda and Niagara Falls. The fall between the lakes is 326 feet and the flow of water is estimated at 6,000 cubic feet per second. The canal will be 38 miles long, 100 feet wide and 20 feet deep. The demands of commerce will be met, as the canal will encircle Buffalo and connect with the Erie Barge Canal. Dockage and manufacturing sites will be provided for factories which will utilize the electric power to be developed at Lockport. The success of the venture depends upon securing the consent of the Government to the diversion of the water.

New Gas Company Finds Purchased Mains Satisfactory

Indianapolis, Ind.—The Citizens' Gas Company, the new company which has purchased the pipe lines of the Consumers' Gas Trust Company, which were laid for the distribution of natural gas, but not used for years, has completed the testing of the mains in one section of the system and has been agreeably surprised to find them in practically perfect condition. The tests were conducted with air under a pressure of ten pounds to the square foot, twice the maximum needed. George Summers, Chief Engineer of the company, is enthusiastic over the condition of the pipes and says the system is not equalled anywhere in the country. High-pressure trunk lines, all of large capacity, reach all parts of the territory. He expects to give consumers excellent pressure with a remarkably small loss from leakage.

Lima Is Assured a Municipal Light Plant

Lima, O.—Judge Mathers has made permanent the temporary injunction preventing members of the City Council from reconsidering their action in passing the ordinance providing for an \$80,000 municipal electric light plant. The fight for a municipal plant has been a most bitter one, but by the decision of Judge Mathers defeat for the Schoepf syndicate, now furnishing the street lights, is made certain. Two members of the Council after voting for all the ordinances making way for the movement, suddenly changed front and called a meeting the day before the ordinance took effect, but are now permanently enjoined from changing their vote.

Electric Lighting War

Newark, N. J.—The Arcade Block Lighting Company and the Public Service Corporation are engaged in an electric lighting war in which employees of the principals have even come to blows. The Arcade company put a subway through a street at night, which on complaint of the Public Service Corporation, was removed by the city authorities. The fight was then transferred to the roofs of buildings, where wire-cutting and personalities were indulged in. The competitor of the big company owns a building and insists on removing all of its opponent's wires crossing its estate.

Incandescent Lamps Best

Seneca Falls, N. Y.—After a month's trial it has been demonstrated that where shade trees are thick an incandescent lighting system is superior to the present lights in use in this village, which are mostly arc. For one month the series of lights placed in State street have been under the observation of the Municipal Board. The officials of the Geneva-Seneca Electric Company have reported to the Municipal Board that they are satisfied with the result of the test and recommend a change in the system where shade trees are low and the growth very dense near the street. Where one arc light is removed three smaller lights of 32-candle power will be installed. By this method the light will be more evenly distributed. The cost of lighting with the smaller lights would be practically the same. The proposition of all-night lighting service is also being agitated.

Must Supply Local Needs First

Ypsilanti, Mich.—In granting a thirty-year franchise to the Washtenaw Light and Power Company, which proposes to spend \$600,000 in construction of a hydro-electric plant on the Huron River incidental to developing water power within the city limits, the provision is made that the needs of Ypsilanti shall first be supplied with electricity developed within a radius of five miles of the city before any current is supplied to other localities. The rates for light and power are at any time not to exceed rates prevailing in other Michigan cities of like size for similar service.

FIRE AND POLICE

New Titles for Hartford Fire Officials

Hartford, Conn.—The Fire Commissioners have approved an ordinance providing that the Foreman of each of the companies of the Fire Department shall be hereafter designated as Captain; that the Fire Commissioners be authorized to appoint a man from the members of the permanent force to act as Lieutenant for each company, who shall perform the duties of Captain in his absence; but that nothing contained in the ordinance shall be construed to authorize an increase in the force of any of the companies; and to approve another ordinance relating to the salary of the Lieutenants, providing that after the present fiscal year the Lieutenant in each company shall receive a salary of not more than \$1,050.

Fire Autos Enter Races

Joplin, Mo.—At the annual tournament of the Southwestern Firemen's Association held at Joplin, Mo., the first race of automobile fire-fighting apparatus ever held in America took place.

High Pressure Displaces Two Fire Companies

New York, N. Y.—As a result of satisfactory tests in actual service of the high-pressure water service, an order has been issued by Chief Edward F. Croker for the removal of two of the most important engine companies of the city from their houses and installing two new hose tenders which have just been built. The companies to be displaced are Number 20, located at Marion street, and Number 72, at Twelfth street, near Fifth avenue, both being what are known as double companies. They will be moved further uptown. The new hose tenders which are to replace them were specially built for this new work. They are double the size of the old wagons, will carry forty lengths of 50-foot hose and will be drawn by three horses. Under the driver's seat will be a Glazier standpipe with three nozzles like a hydrant. Three lines of three-inch hose can be attached to these Glazier hydrants, which will then be hooked up with the new water mains and the company will be ready to pour into a fire a stream much more powerful than the old streams.

Police Rule Book Revised

Providence, R. I.—The Board of Police Commissioners is revising the rules of the Police Department and for the first time in seven years a printed book of rules will shortly be issued. The Commissioners are reticent about discussing what changes, if any, will be made in the new book. The work of compiling the book is being done by Commissioners Luther and Presbrey. The book will contain the old rules as well as any amendments or abrogations which have been made to them.

Uniforms for Schenectady Police

Schenectady, N. Y.—The purchase of uniforms for the Police Department has for several years past been an annoyance to the Commissioner of Public Safety and Chief of Police Rynex because of the difficulty in securing uniforms of the same shade of blue. Under the present system the patrolmen purchase their uniforms from local shops after samples have been submitted for the approval of the authorities. It is now proposed to purchase the cloth in bulk and sell it to the patrolmen at cost price, to be made up at the local shops, and in this way secure the same material and shade on every occasion.

New Feature in Fire House

South Bend, Ind.—A new feature of a hose house recently completed and put in service, claimed to be different from any other in America, is a pair of automatic sliding outer doors. They are controlled by a lever which extends over the head of the driver as he mounts his seat on the wagon.

No Firemen to Spare for Street Flushing

Paterson, N. J.—At a recent meeting of the Board of Police and Fire Commissioners a communication was received from the Board of Health calling attention to the fact that a number of streets in which there are no sewers are in an unhealthy state and should be flushed from time to time. The request was made that firemen be detailed to do this work, but as there are not enough members in the Department as it is, the communication was placed on file.

No Horses Above First Floor

Washington, D. C.—A hearing will be granted by the Commissioners to livery stable owners in the District as a result of the recommendations made recently by Fire Chief W. T. Belt, that the fire regulations be amended to prohibit the stabling of horses above the first floor. Chief Belt also has procured for Commissioner Macfarland information as to the fire protection for stables in several of the big cities. Only two or three cities have made special efforts along this line. There is now no law or regulation under which the Fire Department can demand proper fire protection for stables. "Experience has convinced me," says Chief Belt, "that no horses or other animals should be stabled on any floor above or below the ground floor."

GOVERNMENT AND FINANCE

Departments Must Not Exceed Estimates

Chattanooga, Tenn.—Mayor W. R. Crabtree has served notice that any departmental official of the city who knowingly and designedly exceeds his budget, in the way of bills made and contracts let, during the coming year, will be suspended from office. This comes from the Mayor, not as a threat, but as an admonition that the city charter must be observed in the transaction of city business. The Mayor gave utterance to the admonition at a meeting of the City Finance Committee, during the session of which final estimates were made of departmental budgets for next year. The result of the session was a net increase of \$10,500 in the appropriations with no change from the \$1.65 levy heretofore agreed upon.

Councilmen and City Jobs

Harrisburg, Pa.—Mayor E. S. Meals has received an opinion from City Solicitor Seitz, in which he rules that a City Councilman can hold but one municipal office. The opinion is the result of the Mayor's request to Highway Commissioner Caldwell to remove President D. W. Brubaker, of Common Council, from the Highway Department's staff of inspectors.

Original Civil Service Provisions Adopted

Kansas City, Kan.—The new charter of Kansas City, submitted to popular vote recently, was adopted by a vote of 14,065 to 5,209. The charter adopted contains effective Civil Service provisions, which become operative in 1910. The Civil Service section has a unique provision with reference to persons holding office at the time the section becomes effective. Generally, in adopting a Civil Service system for the first time office holders are "covered in" with or without some sort of examination. In Kansas City, however, the Civil Service system is to begin with a clean slate; all positions being filled anew under the Civil Service rules. The Civil Service Commission is to consist of three persons known to be devoted to the improvement of the Civil Service, and are to serve for terms of three years, without compensation. The service is divided into the exempt and classified services, and the exempt class is very restricted. The classified service is divided into the competitive and labor classes. Positions in the competitive class can be filled without competitive examination only in two cases. A provisional appointment for not more than sixty days may be made when there is no eligible list for the position to be filled; and the Commission may, by unanimous vote, allow an appointment to be made without com-

petition to a position in the competitive class requiring peculiar and exceptional qualifications of a professional, scientific or occasional character, where the person to be selected is of high and recognized attainment in such qualities. No person in the competitive class shall be removed without receiving a written statement setting forth in detail the reason, and at the option of the person removed a copy of such statement with any reply shall be filed in the office of the Commission and be open to public inspection. Whenever the Commissioners have reason to believe any person having power to discharge has abused such power for political or other reasons not solely for the good of the public service, it is their duty to make an investigation, and if they find that any violation of the intent and spirit of the removal provision has been made, they must report such fact to the Mayor, or officer having power to remove, and such report shall be sufficient cause for the removal of the offending person. The highest person on an eligible list must be appointed. In case of two or more applicants receiving the same rating, lots shall be cast to determine the order in which their names shall be placed on the eligible list. The provisions against political assessments are very stringent. No person shall solicit orally or by letter or otherwise, or be in any manner concerned in soliciting any assessments, contributions or payment for any political party or for any political purpose whatever from any officer or employee in the classified service of the city, and no officer or employee in the service of the city shall in any manner give or hand over to any other officer or employee of the city any money or other valuable thing for political purposes.

Commission Will Consider Malden City Finances

Malden, Mass.—In accordance with the suggestions of Mayor George L. Richards, expressed in a four-page communication, Council has appointed a committee to look into the financial condition of the city, which has resulted in the highest tax rate in the history of the city. The Mayor said he wished the matter investigated in justice to the taxpayers and that no criticism of any person or body was intended. The committee, which consists of the Mayor, two members of the Board of Aldermen including the Chairman, two members of the Council, including the President, two of the School Committee including the Chairman and seven citizens, one from each ward, will report back its findings and recommendations by December.

Would Check Private Use of Public Automobiles

New York, N. Y.—Comptroller Herman Metz is seeking to check the use of the city's hundred automobiles for private purposes. He wants a city-owned and controlled garage and also to have odometers or taximeters attached to all city-owned machines. His inspectors have made several interesting reports as to the present condition of things. They have spotted municipal automobiles in Coney Island and other resorts, one machine being caught with a pleasure party as far out on Long Island as Huntington. The city's automobiles have cost \$260,000 to acquire, and the cost of maintenance is estimated at \$300,000 annually.

REFUSE COLLECTION AND DISPOSAL

Automobile Cleans and Sprinkles

Berlin, Germany.—The enterprise of the city of Berlin is again shown by the introduction of a motor sprinkling and cleaning cart which is proving economical and satisfactory to the city department. The machine has an eight-horsepower accumulating motor and carries 600 gallons of water. This machine is destined to replace the sprinkling wagon and the rubber scraper and saves the city hundreds of dollars, besides doing the work more quickly and satisfactorily. It combines the sprinkling and cleaning operations in one single act. One man in this machine can do the work formerly accomplished by several sprinkling wagons drawn by horses, and the work of hundreds of men with the rubber cleaner.

Unique Dispute Over Garbage Collection

Buffalo, N. Y.—The collection of garbage by the Buffalo Fertilizer Company forms the basis of a complicated situation now pending before Judge Hodson in Municipal Court. This company recently took over the contract for disposing of garbage. It at once raised objection to an agreement which farmers have had with hotel and restaurant keepers for the collection of garbage. This attempted interference with what they alleged to be established custom resulted in objections from the farmers of Cheektowaga, who formerly fed their cattle on the garbage collected from hotels and restaurants in Buffalo. To annoy the company, which has a reduction plant at Cheektowaga, the Town Board of the place passed an ordinance prohibiting garbage wagons from passing through its streets unless a permit was secured. The permit was refused, and the company had to secure permission of the town of Sloan, on the south side of William street, beyond the city line, which divides the villages, to carry garbage on its side of the street. To do this the company must violate the law, as the Sloan side of the road is on the left-hand side.

Garbage System Criticized by Health Officer

Council Bluffs, Ia.—Health Officer C. H. Bower has been giving some attention to the manner in which garbage is disposed of in Council Bluffs, and expresses the opinion that there must be some changes in the system of securing its removal. It is his belief that the city should take the matter in charge and see that families are enabled to dispose of the refuse regularly without unreasonable expense. "The sanitary condition of Council Bluffs is below normal," said the Health Officer, "the beauty of the city is destroyed and the health of the citizens menaced or impaired by the conditions existing on vacant lots and in alleys. There we find unsightly piles of old shoes, bottles, ashes and unsanitary heaps of table refuse, left to ferment for weeks, or until a sufficient quantity accumulates to justify them in paying exorbitant prices for its removal."

City Burns Many Tons of Refuse

Joliet, Ill.—Nearly two thousand tons of refuse was disposed of at the city crematory during the month of August, and to accomplish this required only eight tons of coal. The report in full is as follows:

Garbage hauled by city carts.....	366 loads
Average weight per load, 1,556 pounds, total.....	385 tons
Rubbish, decayed fruit, etc., hauled by merchants and packing houses	12 tons
Total consumed in crematory furnaces.....	297 tons
Ashes and refuse hauled to city dumps by city carts	815 tons
Ashes and refuse hauled to city dumps by four teams	720 tons
Grand total disposed of for month.....	1832 tons
Amount of coal consumed for month.....	8 tons
Average coal per ton of garbage.....	55 pounds
Waste paper collected and destroyed.....	156 loads
Street sweepings picked from improved streets.....	624 loads
Dogs cremated	58 head
Horses cremated	3 head

Preparations Made for Municipal Collection

Scranton, Pa.—Director of Public Works C. R. Acker is busy these days preparing the routes for the teams that will collect ashes and garbage. At first there will be ten teams for the collection of ashes only, but later there will be ten more for the collection of garbage. Before the system is started, the director will prepare circulars containing excerpts from the various city ordinances relating to the care and disposal of garbage and to these will be added department rules that will be strictly enforced. No householder will be allowed to mix ashes and garbage in the same can and persons failing to heed the warnings of the drivers will be penalized. One of these circulars will be left at every house in the city, so there will be no excuse for ignorance. The collection of ashes will be started early next month.

Garbage Question in New Haven

New Haven, Conn.—At a public meeting called by the Board of Finance for the purpose of inviting discussion on the proposed estimates, the principal topic of the evening was the disposal of garbage. Although there were a few citizens present who objected to the city establishing an incineration plant, the general opinion was in favor of the proposition, although it was estimated that the adoption of the plan would have the effect of increasing the tax rate from 1 1-2 to 3 miles.

Railway Company Must Sprinkle Streets

Wilmington, Del.—The street railways of Wilmington will be fined not less than \$10 nor more than \$50 for every day on which they do not sprinkle twice a day the streets over which their tracks are laid, and if they do not do so immediately they will be fined for every rainless day they have failed to sprinkle since April 1. The action was taken under a city ordinance requiring the companies to sprinkle the streets from April 1 to October 15 of every year twice on each day on which there has been no rainfall. The failure of the railway companies to observe the regulation brought the matter to the attention of the Street Directors.

RAPID TRANSIT

Chicago to Ventilate Cars

Chicago, Ill.—Health Commissioner Evans has announced that before cold weather comes, in all probability, both the Chicago City Railway and the Chicago Railways Co. will have begun the installation of a new ventilating system. The general scheme of this system provides for steady supply of fresh air; the raising of the temperature of this air to 60 degrees or more before it begins to circulate; introduction of the fresh air from the bottom of the car and escape of "used" air from the top, and a minimum of heating cost consistent with warmth. Street car companies, the Board of Supervising Engineers, the division heads in the Health Department and various architectural and civil engineers have collaborated in devising the new system. The need for special ventilators did not exist in the old cars, but the new cars are nearly airtight.

Cleveland's Traction Referendum Campaign

Cleveland, O.—The campaign over the referendum on the security franchise grant is progressing. The Municipal Traction Company's friends seem to be having difficulty in avoiding the two horns of a dilemma. Under the ordinary State laws for the incorporation of corporations, a company must be organized for purposes of profit. As a purely public enterprise, the Municipal officials can hardly claim that they are looking for profits. It has been suggested by Frederic H. Goff, who was largely instrumental in effecting the agreements between the Municipal and Cleveland Electric, that the stock be placed in the hands of trustees for the benefit of public institutions such as hospitals and schools. N. D. Baker, Director in the Municipal and City Solicitor, thinks that the limitation of the franchise to ten years is a sufficient guarantee the road will be operated in the public interest.

Attempt to Increase Fares Abandoned

Philadelphia, Pa.—Not only have the people won their fight against the straight five-cent fare proposition of the Rapid Transit Company, but other reforms have been forced by the strength of public opinion. A director of the company is responsible for the statement that alliance between the city and the company has widened the breach between the company and its patrons. At any rate, at a time when a report from the Councilmen's committee favoring a straight five-cent fare was expected, the company has announced that there will be no change from the present arrangement of six tickets for a quarter. Complaints that the police and city hospital employees have intimidated persons injured by accidents by trolley cars, with a view to securing prompt and easy settlements for the company, will be looked into and the above remedied.

MISCELLANEOUS

Speedometer to Detect Speed Violations

Butte, Mont.—An important ordinance has been introduced in Council and referred to the Judiciary Committee, referring to the regulation of motor vehicles. The ordinance provides, in addition to the present provisions, that each such machine must carry a recording speedometer, which can be detached by any police officer to be used as evidence of speed, and which is to register speed by quarters of an hour. It is also provided that any person who is convicted under the ordinance shall have no further right to a license to drive his machine, and the number and license shall be taken from him and the machine not be allowed thereafter to be driven on the streets of the city. The fine for violating the ordinance is from \$5 to \$500, assessable against the owner of the machine, and the regulations regarding speed are left as before, at eight miles an hour and straight streets, and four miles at crossings and turns.

Philadelphia Proposed Harbor Improvements

Philadelphia, Pa.—Embodying recommendations for improved harbor facilities which if secured would in his judgment place Philadelphia in a position to compete successfully with other large American cities for a share of the world's commerce, Director Grady has submitted a lengthy report to Mayor Reyburn giving a detailed history of his recent visit to the maritime centers of Europe. The improvements recommended, which embody many of the most successful and up-to-date ideas utilized with profit by the large commercial trading ports of Europe, include new piers at Vine and Dock streets on the Delaware River, the construction of a dam across the mouth of the Schuylkill River. The most radical suggestions contained in the Director's report are that no extensive improvements be made along the river front in what is now the shipping center, except for the use of transatlantic combined passenger and freight steamships, and that the old plan of piers be abandoned for the anchoring basins which have added greatly to the facilities of European ports. To this end the Director urges that the city of Philadelphia at once begin condemnation proceedings to secure that portion of the Greenwich Meadows between the Delaware and Second street, so that it can be converted into great basins for the accommodation of freight steamers and commercial craft.

Traffic Regulations Issued

Washington, D. C.—Regulations governing traffic in the District have been issued by Major Sylvester. They prohibit the following acts:

To drive or propel any vehicle at a greater speed than twelve miles an hour on any street inside of the fire limits.

To drive or propel any vehicle faster than fifteen miles an hour in any park.

To drive or propel any vehicle across any intersecting streets at a greater speed than eight miles an hour.

To drive or propel any vehicle around the corner of any street or avenue at a greater rate of speed than six miles an hour.

To operate any motor vehicle, bicycle or tricycle without a suitable gong or bell (or, in the case of motor vehicles, a suitable horn).

To operate any motor vehicle, bicycle or tricycle between an hour after sunset and an hour before sunrise without suitable lights.

For the driver or operator of vehicles in motion to follow each other closer than fifteen feet.

To drive or propel a vehicle on other than the right-hand side of the street.

For drivers of public vehicles to stop or loiter with their vehicles or solicit passengers upon the streets.

To transport or convey explosives without first having obtained permission from the Commissioners of the District of Columbia to do so.

To operate any motor vehicle at night without a lamp attached to the left side of the rear of the vehicle, so as to throw a white light upon, and thus make plainly visible, the identification number, and to show a red light to the rear.

Vehicles of the Police, Fire and Health and Water departments and hospital ambulance have the right of way on the public streets.

Pedestrians have the right of way at street crossings.

LEGAL NEWS

Summary and Notes of Recent Decisions—Rulings of Municipal Interest

DEFECTIVE SIDEWALK—LIABILITY—NOTICE

City and County of Denver vs. Magivney.—A city must exercise ordinary care to prevent its sidewalks from becoming defective, and a failure so to do will, under proper circumstances, render it liable for injuries caused by such defects. A city is not liable for injuries caused by defects resulting from the negligence of another, unless it had actual or constructive notice of the defect for a sufficient length of time to have cured the same before the accident. A water company placed a water box in the outer edge of a sidewalk. Thereafter the city widened the walk and left the box more than two feet inside the curb. The surface of the walk was three inches above the top of the box. The city had knowledge of the defect from the time of the laying of the walk until an accident to a pedestrian stepping into the depression. Held to authorize a finding that the city had ample notice of the defect, on it being assumed that the original negligence was that of the water company, rendering the city liable.—Supreme Court of Colorado.

PERSONAL INJURY—VERDICT NOT EXCESSIVE

Matthews et ux. vs. City of Spokane.—The Supreme Court will not disturb a recovery of \$2,000 for a personal injury as excessive, where the injured person was about 30 years old, her knee was sprained, her injury was permanent, being chronic synovitis and she suffered on using the knee and had been compelled to wear a support for it, and had been incapacitated for work for seven months, and where the cause was tried twice with the same result.—Supreme Court of Washington.

REASSESSMENT—PURCHASER

Barkley et al. vs. City of Lincoln et al.—Section 7992, Cobbey's Annual Statutes of 1907, providing for reassessment of property by the City Council in all cases where special assessments have or may be declared void or invalid, does not authorize a reassessment of property for the benefit of a purchaser at tax sale who fails to recover the amount of such special taxes from the property on account of the illegality of the assessment. An injunction will lie to restrain the City Council from proceeding under color of right to reassess special taxes and relevy the same upon property when they have no authority to do so.—Supreme Court of Nebraska.

POLLUTION OF STREAMS—DAMAGES

Kellogg vs. City of Kirksville.—Where a city collects its sewage, and discharges it in a volume into a stream, whereby a riparian property owner is injured, he may recover for a permanent injury to the property, and depreciation in the value of the land caused by the nuisance is a proper element of the damage.—Kansas City Court of Appeals, Missouri.

ELECTION—CLERICAL ERROR

Lodgord vs. City of East Grand Forks et al.—In giving a notice of election the City Clerk signed the name as "City Recorder," and thus by mistake or inadvertence erroneously designated his official title. Held, on the facts stated in the opinion, not fatal to the validity of the election.—Supreme Court of Minnesota.

PUBLIC IMPROVEMENTS—VOTERS

Coggeshall et al. vs. City of Des Moines et al.—In an action to enjoin the erection of a City Hall, on the ground that women had not been permitted to vote at the election authorizing the same, as they were entitled to do by Code, evidence that the City Solicitor had stated to the attorney for a political equality club that in his opinion women were not entitled to vote, and that no provision would be made for them, was admissible in connection with proof that the city officers acted on such advice, as tending to show the denial of the privilege of voting to women generally.—Supreme Court of Iowa.

ICY SIDEWALK—PERSONAL INJURIES

Hendrickson et ux. vs. Chester City.—Where plaintiff fell on a sidewalk because of the generally slippery condition of the street, such as naturally occurs in all cities in winter time, the city was not liable for the injuries.—Supreme Court of Pennsylvania.

QUALIFICATIONS OF ENGINEERS

City of Abilene et al. vs. Lambing et al.—Engineers chosen and employed by the Mayor and Council of a city of the second class to make plans, specifications and estimates for a sewer system for the city, and to supervise the construction of sewers made an estimate in pursuance of section 1,009, General Statutes 1901, under which a contract was let and a sewer constructed. Owners of lots subject to assessment to pay for the sewer sought to enjoin the work and the assessment on the ground that the engineers were non-residents and ineligible to be City Engineers, that they had not been appointed and qualified as such, and that the estimate and contract were therefore invalid. Held, that as the engineers were chosen by the officer having authority to appoint city engineers at a time when no one else was in possession of the office of City Engineer, and as they acted in behalf of the city in respect to the improvement, and had been so recognized by the city authorities and others and had faithfully performed their duties, there was a substantial compliance with the requirement of the statute as to an estimate, and plaintiffs were not entitled to maintain injunction upon the grounds assigned.—Supreme Court of Kansas.

WARRANTS—LIMITATION OF ACTIONS

Rogers vs. City of Omaha.—A warrant issued by a city in consideration of a demand which is a valid obligation, payable out of its general funds, is not invalidated by a recital, not contemplated by the statute, that it shall be payable out of a special fund which the city is not authorized to create, or out of a special fund which the city may lawfully create, but the failure to create which is due solely to the fault or negligence of the city. The statute of limitations does not commence to run against warrants issued by a municipal corporation, payable out of a special fund to be created, until such fund has in fact been created, and there is sufficient money in the fund with which to pay the warrants.—Supreme Court of Nebraska.

REMOVAL OF OFFICE—BOILER INSPECTOR

Gracey vs. City of St. Louis.—Deputy Inspectors of Boilers and Elevators, provided for by the charter of the city of St. Louis, perform public functions. They have a fixed tenure of office of four years and are required to give bond. Their salaries are fixed at a certain sum per year. Their qualifications are prescribed by law. Their public position is expressly denominated as an office, and their duties as official duties. The charter defines officers as those holding situations under the city government or its departments with an annual salary or for a fixed definite term of office, and the forms of official oath and bond prescribed refer to their positions as officers. Held, that they are officers, although McQuillin's Municipal Code of St. Louis authorizes the Inspectors of Boilers and Elevators to "employ" deputies; the word "employ" conveying the idea of selecting and intrusting with a duty. A Deputy Inspector of Boilers and Elevators in the city of St. Louis, being an officer, cannot be removed during his term, except for cause and on due charges and hearing, after notice, and an attempted removal without such charges and proceedings does not deprive him of his right to salary for the balance of his term.—Supreme Court of Missouri.

PUBLIC BUILDING—COST OF PLANS

Ely et al. vs. Mayor, Etc., of City of Newark.—By the act of 1900 the Board of Health of Newark was empowered to resolve that it was necessary to establish a hospital, and directed to set forth in the resolution the estimated cost thereof, and certify the resolution to Common Council, and thereupon the Common Council was directed to appropriate a sum of money not exceeding \$100,000, for furnishing buildings for such hospital. Held, that the Board of Health could not bind the city to pay for plans and specifications for a building which would cost \$200,000, which plans could be of no use in estimating the cost of a building which would cost \$100,000 or less.—Court of Errors and Appeals of New Jersey.

SERVICE ON MUNICIPAL CORPORATION

Smith vs. City of Washington.—There being no provision of law to require a Solicitor-General to represent municipal corporations within his judicial circuit, service of notice of the sanction and of the time and place of hearing of a certiorari upon the Solicitor-General is ineffectual for the purpose of serving a municipal corporation. Service upon a municipal corporation cannot be had by serving the Solicitor-General of the judicial circuit wherein the municipality is located.—Court of Appeals of Georgia.

SEWER ASSESSMENT—CONSTITUTIONALITY

McGarvey vs. Swan, City Treasurer.—Under laws 1903, authorizing a certain city to apportion sewer assessments upon adjacent land, according to its area, there are questions upon which hearings might be had by the city, without violating the statute respecting the assessment and the amount thereof, e.g., the total cost proposed to be assessed upon the district; the extent of the area of any particular tract; the propriety of ordering the improvement; the correctness of the computation of a particular assessment, whether the improvement is of such local character as to justify a special assessment, or whether the expense should be borne by general tax, if that is authorized under the charter laws, or by the issuance of corporate bonds, etc. It is essential to the validity of a special assessment that it be levied under a valid statute, but before a court will declare a statute unconstitutional the party assailing it must present a case showing some just grievance, and that he is entitled to relief.—Supreme Court of Wyoming.

INNKEEPERS—LICENSE TAX

Atlantic City vs. Hemsley.—Under subdivision 27 of the city charter of Atlantic City the City Council of the city has no power to pass an ordinance imposing a sleeping room license tax upon a hotel that is licensed by the City Council of the city as an inn and tavern and to sell intoxicating liquors and is so conducted.—Supreme Court of New Jersey.

DEFECTIVE SIDEWALK—NOTICE

City and County of Denver vs. Bacon.—The charter of a city requiring one claiming damages for injury on a sidewalk to give notice to the city stating fully how the injury occurred, is satisfied by a notice stating the cause of the injury: "Because of the torn up and impassable condition of the sidewalk, and without any lights or warning of impending danger."—Supreme Court of Colorado.

BONDS—LACHES

Eddy vs. City and County of San Francisco.—A bill to charge a municipal corporation as a voluntary trustee under a legislative act which required it to levy and collect taxes within a certain improvement district, and from the fund collected to pay the interest and principal of certain bonds, of one of which complainant was the owner, which shows on its face that the defendant ceased and refused to perform any of such required acts twenty-five years before the bill was filed; that no interest had been paid since that time, and that the bonds matured eight years before suit, and alleges no facts which excuse the delay in bringing suit, discloses such laches as to defeat the right to maintain the suit and renders the bill demurrable.—United States Circuit Court of Appeals.

WATER SUPPLY CONTRACT—PERFORMANCE

Mayor, Etc., of Jersey City vs. Flynn et al.—A city is not entitled to insist that a water supply contract shall be specifically enforced by a conveyance of the water works to it, and at the same time to repudiate an agreement that, in the event of the completion of the water works before the claim of another to a part of the water supply had been released or extinguished, the city should be entitled to retain out of the purchase price a certain sum until a decision of the highest State court adverse to such claim, or the delivery of a release thereof, or an abandonment of a canal by the one claiming the right to the water, and demand an additional deduction.—Court of Chancery of New Jersey.

CLOSING STREETS—PRIVATE PROPERTY

Gillender vs. City of New York.—An owner of property abutting on a public street has a right therein entitling him to have the same continued as a public street for the benefit of his property, and this right constitutes an easement in the bed of the street, which attaches to the abutting property and is "private property," within the meaning of the Constitution, of which the owner cannot be deprived without compensation.—New York Supreme Court, Appellate Division.

RIGHT TO PROVIDE FOR EXTRA WORK

Heman vs. City of St. Louis.—In the absence of a charter provision prohibiting it, a city may contract for extra work connected with street improvements without first making a specific appropriation for the purpose, subject only to the constitutional limitation of 5 per cent. on the assessed value of the property within the city limits.—Supreme Court of Missouri.

ACTION ON MARSHAL'S BOND—ALLEGATIONS

City of Carthage vs. Burton.—The petition in an action on the bond of the marshal of a city for an unlawful beating of plaintiff while under lawful arrest should allege that plaintiff was not trying to escape from the officer, and that he did not first assault him, for, if he endeavored to make his escape, and in so doing made an attack on the officer and put him in danger of bodily harm, the officer was not bound to retreat, but had the right to use any necessary means for self defense and for the keeping of plaintiff as a prisoner.—Court of Appeals of Texas.

IMPRISONMENT FOR VIOLATION OF ORDINANCE

O'Haver, Chief of Police, vs. Montgomery.—Under the Memphis city charter and amendments, providing that the city shall have power to establish workhouses and declare what acts shall be misdemeanors, and punish the offenders by fine, and by imprisonment at labor in default of payment of the fine, and declaring that the city shall have power to compel lot owners to make safe and proper sidewalks of brick, plank, stone or granolith, the city may by ordinance require abutting owners to construct sidewalks as the legislative council shall declare by resolution, and provide that a failure to conform to the ordinance shall be a misdemeanor and subject the offender on conviction to a fine, etc., and an offender failing to pay the fine imposed may be committed to the workhouse until the fine shall be paid or worked out, as against the objection that the requirement of the ordinance simply creates a debt against the abutting owner.

TELEPHONE FRANCHISE—CONSTRUCTION

Cumberland Telephone & Telegraph Co. vs. City of Hickman. Same vs. Davidson et al.—A city telephone franchise providing that the grantee should connect the central exchange, and thereby each subscriber's instrument with other specified towns and cities, and specifying monthly rates of \$1.50 and \$2.50 for residence and business phones, respectively, does not entitle subscribers to service to such other towns and cities without additional charge, but merely gives them the privilege of using long-distance connections from their phones.—Court of Appeals of Kentucky.

POLES AND WIRES IN STREETS

Southern Bell Telephone and Telegraph Co. vs. City of Mobile et al.—A telephone company cannot lawfully occupy the streets of a city with its poles and wires without legislative authority, granted directly by the Legislature or by the municipality in pursuance of express or implied power delegated to it. Code of Alabama, 1896, which provides that "the right of way is granted to any person or corporation having the right to construct telegraph or telephone lines within this State to construct them along the margin of public highways," confers upon a telephone company the right to construct its lines in the streets of a city, which are "highways" within the meaning of the statute. An injunction will be granted to restrain a city from removing the poles and wires erected in its streets by a telephone company under lawful authority, in the exercise of its police powers, and without a judicial determination that they constitute an obstruction which interferes with the safety or convenience of ordinary travel.—United States Circuit Court.

SIDEWALK ORDINANCE INVALID IN PART

Brizzolara et al. vs. City of Ft. Smith et al.—Incorporated cities and towns have no power to compel property owners to construct gutters. An ordinance requiring property owners to construct sidewalks, curbing and guttering is not invalid because failing to provide for proper filling, ditching, excavating and grading before the curbing and guttering is placed, since in such failure it does not require property owners to do such work, which they may not lawfully be required to do.—Supreme Court of Arkansas.

CONTRACTORS' "MATERIALS" DEFINED

Kansas City, to Use of Kansas City Hydraulic Press Brick Co. et al., vs. Youmans et al.—Blasting powder, dynamite, fuse and caps, necessarily used by contractors in building a sewer, are "materials" within the meaning of a guaranty that the contractors would pay for material used in the work. Tools, implements and appliances are not "materials," within the meaning of a guaranty that contractors would pay for material used in the work of building a sewer; and the fact that they were entirely consumed therein, being worn out and broken, does not change the rule.—Supreme Court of Missouri.

NEWS OF THE SOCIETIES

American Society of Municipal Improvements.—The next convention will be held at Atlantic City Oct. 20-23. The headquarters during the convention will be the Hotel Dennis. The rates at this hotel during the convention will be as follows: Rooms without private bath: single room for one person, \$3 to \$4 per day; double room for one person, \$5 per day; double room for two persons, \$6 to \$8 per day. Rooms with private bath: single room for one person, \$5 and \$6 per day; double room for one person, \$7 per day; double room for two persons, \$8 to \$10 per day. These prices are American plan. The only large hotels on the Board Walk where the European plan may be found are the Marlborough-Blenheim and the Shelburne; the rates for the former being \$2 to \$8 per day and the latter from \$1.50 per day up.

The preliminary programme of the convention is as follows:

Tuesday, October 20, 10 a. m.: Meetings of the Executive and Finance Committees, at the committee rooms, Hotel Dennis. 11 a. m.: Members and visitors register and obtain badges, programmes, etc., at the Secretary's office, Hotel Dennis. 2 p. m.: Opening of the convention in the meeting room. Address of Welcome by Mayor Franklin P. Stoy. Response by the President of the Society, George W. Tillson. Following this the regular order of business will be taken up and will be continued Tuesday evening.

Wednesday, 9 to 12 a. m.: Reading of papers. Wednesday afternoon, drive through the city to the various points of interest, through the courtesy of the Publicity Bureau and the hotel and other business men of Atlantic City. Wednesday evening: Reading of papers, illustrated by lantern slides.

Thursday, 9 to 12 a. m.: Reading of papers. Thursday evening: Reception at hotel headquarters by city officials and leading citizens.

Friday morning, 9 to 12 a. m.: Final business session.

The applications for membership are already greater in number than have been presented at any previous convention of the Society and many of the applicants have expressed their intention to be present. It is urgently requested that every applicant attend the convention and become acquainted with the members. The election of new members will take place during the first session, so that there will be no embarrassment with reference to their attending the meetings. Atlantic City offers unusual attractions for visitors and it is suggested that those attending the convention bring their wives and other members of their families. The Publicity Bureau announces that abundant entertainment will be provided for them.

County Commissioners of Pennsylvania.—The twenty-second annual convention met in Greensburg, September 15-17. A number of interesting topics were discussed, particularly matters referring to taxing public utility corporations, the control of jails, the appointment of assistant assessors and the question of equitable assessments. The question of how to obtain more equitable and correct assessment and avoid the practice of copying from year to year as it now exists, was taken up by the Solicitor of Fayette county, R. F. Hopwood. Another question discussed pertains to regulating the costs in cases coming before magistrates. John W. Kephart, Solicitor of Cambria county, opened a discussion on "How to avoid excessive costs on cases as piled up by many justices and constables."

Central States Water Works Association.—The twelfth annual convention was held at the Monongahela House, Pittsburg, Pa., on September 15-17. The first session was called to order by F. B. Leopold, Chairman of the local committee of arrangements, who introduced Hon. Geo. W. Guthrie, Mayor of Pittsburg. The response to Mayor Guthrie's address of welcome was made by Vice-president William Schwertfeger, of Wheeling, W. Va. T. C. Clifford, Chairman of the Entertainment Committee, announced the various programme features, including informal reception for ladies and trips to nearby points of interest under the auspices of the Ladies' Reception Committee; theater party at the Grand Opera House for the ladies Tuesday night; trip to main plant of H. J. Heinz Company; sight-seeing automobile trip through Schenley and Highland parks; ladies' theater party at Alvin Theater Wednesday night; trip to Carnegie Library, etc. For the gentlemen, a smoker and vaudeville Tuesday night; trip to Pittsburg Filtration Works at Aspinwall on Wednesday, and to Filtration Works at McKeesport for ladies and gentlemen on Thursday, concluding with an evening at the Pittsburg Exposition. The reports of the Secretary and Treasurer showed finances in good condition and a working balance in the treasury. The convention adjourned to visit the shops of the Westinghouse Company and the Pittsburg Meter Company. In the afternoon the members were guests of the city at the new filtration plant, at lunch.

The following were the technical papers presented during the sessions: John Langan, Tipton, Ind., "President's Address," "Management of Water Plants"; Alexander Potter, Consulting Engineer, New York City, "McKeesport Softening Plant"; R. Winthrop Pratt, Chief Engineer, State Board of Health, Columbus, O., "Sanitary Laws in the Protection of Water Supplies"; Nicholas Hill, Jr., Consulting Engineer, New York City, "Tuberculation of Water Main"; Westinghouse Machine Company, East Pittsburg, Pa., "Pumping by Gas Power"; John W. Alvord, Consulting Engineer, Chicago, Ill., "Water Works Appraisals"; Arrow Boiler Compound Company, St. Louis, Mo., "Incrustation of Steam Boilers"; F. B. Leopold, "The Engineer on Water Purification Plants." Papers were also read by the following: Alva L. Holmes, Hydraulic Engineer, Grand Rapids, Mich.; L. M. Latta, Manager Water Company, Akron, O.; C. W. Wiles, Superintendent Delaware Water Company, Delaware, O.; Wilbur Schofield, Superintendent Benwood Water Company, Benwood, W. Va.

Lake Michigan Water Conference.—The contamination of lake water by sewage was the subject of discussion at the conference of twelve delegates to the Lake Michigan water conference, at Milwaukee, September 11. Major W. V. Hudson, United States engineer, declared sewage will contaminate lake water as far as thirty miles from shore. The varying currents, he declared, make it difficult to tell at what points there is least danger of contamination.

League of New Jersey Seashore Municipalities.—At the meeting of the League at Atlantic City, September 10, the principal subject of discussion was the route of the proposed inland waterway to be developed by the State. Opinion was almost unanimous that the channels laid out were too far from the principal seaside towns and cities.

New England Water Works Association.—The twenty-seventh annual convention will be held at Atlantic City, September 23 to 25. The official headquarters of the association will be at the Traymore Hotel, and each member and guest is requested to register his name and obtain the association badge from the secretary. All meetings will be held in the assembly hall at the hotel, and the following program has been arranged:

Wednesday, Sept. 23.—Morning, 9:30: Address of welcome; business meeting; paper, "Water Purification at Philadelphia," by John C. Trautwine, Jr., Civil Engineer, Philadelphia, Pa.; illustrated by lantern slides. Afternoon, 2:30: Report of the Committee on the Conservation of the Natural Resources of the Country; address, "The Conservation of Water Resources," by Marshall O. Leighton, Chief Hydrographer, U. S. Geological Survey, Washington, D. C.; address, "Forestry," by R. S. Kellogg, of the U. S. Forest Service, Washington, D. C. Evening, 7:30: Roller chairs. 9:00, officers' reception; music and dancing.

Thursday, Sept. 24.—Morning, 9:30: Report of the Committee on Standard Specifications for Fire Hydrants; paper, "History of the Haverhill Water Works," by Albert L. Sawyer, Water Registrar, Haverhill, Mass.; paper, "Rubber Pipe Joints," by R. S. Weston, Sanitary Expert, Boston, Mass.; paper, "Covered Reservoirs; some experience in the use of concrete in their construction and in making them watertight," by Frank L. Fuller, Civil Engineer, Boston, Mass. Afternoon, 2:30: Paper, "Meters and Water Consumption of the Hartford Water Works," by Ermon M. Peck, Distribution Engineer, Hartford, Conn.; paper, "Meter Rates," by W. H. Richards, Engineer and Superintendent, New London, Conn.; paper, "The Water Service and Insurance Rates," by Frank A. Barbour, C.E., Boston, Mass. Evening, 8: Report of Committee on Awards that have been made for damages resulting from the diversion of water; paper, "Stream Flow Data," by Charles E. Chandler, Civil Engineer, Norwich, Conn.; paper, "The Adjustment of Damages for Stream Diversion by Storage Compensation," by Robert E. Horton, Hydraulic Engineer, Albany, N. Y.; report of Committee on Awards that have been made in water works valuation cases.

Friday, Sept. 25.—Morning, 9: Trolley ride, including visit to water works pumping station; afternoon, open.

New Haven County Health Association.—The tenth annual meeting of the New Haven County Health Association was held September 10 at Cox's Hotel, Savin Rock, Conn. About 50 officials, some of them with their wives, who were invited, were present. Representing the State Board of Health were Dr. Joseph H. Townsend, Prof. W. H. Brewer and F. H. McKenzie. H. W. Averill was present as a representative of the Cattle Commissioner's office, and Hubert W. Potter from the Dairy Commissioner's office. Dr. J. C. P. Foster, President of the State Commission of Tuberculosis, made the address of the day. He spoke on the subject of tuberculosis and the duties of health officials in relation to the enforcement of the law and the efforts being made by his association to prevent the spread of the disease. In addition to the election of officers for the ensuing year and the transaction of routine business, the annual dinner was served. The following officers were elected:

President, C. E. Hoadley, of New Haven; Vice-president, Hubert F. Potter, of North Haven; Secretary and Treasurer, Dr. E. A. Wilson, of Meriden; Member of Executive Committee for three years, F. G. Davidson, of Bethany.

McCormack Health Association.—At a recent meeting of the Association in the Y. M. C. A. building, Johnstown, Pa., an interesting paper was read by President John Fulton, of the Board of Health, on "The Powers of the Board of Health." He reviewed the statutes and ordinance on the subject and described the organization and work of the Board. Dr. F. R. G. Schill delivered an address on "The Visiting Nurse."

National Association of Comptrollers and Accounting Officers.—At the third annual convention, now holding sessions at Louisville, Ky., the following programme is being carried out:

First day's session, September 22, 10 a.m. Call to order by the President, Hon. Louis Betz, City Comptroller, St. Paul, Minn.; welcome on behalf of the city of Louisville, Hon. James F. Grinstead, Mayor; President's Annual Address, Hon. Louis Betz; Secretary's Report, Howard C. Beck, C. P. A., Detroit, Mich.; Treasurer's Report, Hon. George Eustis, City Treasurer, Birmingham, Ala.; Appointment of Auditing Committee. "The Technical Side of Municipal Accounting." "Underlying Principles of Municipal Accounting," "Duncan MacInnes, C. P. A., Department of Finance, New York City. "The Municipal Balance Sheet, Its Feasibility and Value," Howard C. Beck, C. P. A., Detroit, Mich.

2:30 p.m. Informal discussion, Subject: Safeguarding the Collection of Public Moneys: The "Stub" System, Its Defects; the Countersign, Its Value. All members are requested to explain the methods pursued in their city.

Second day's session, September 23, 10 a.m. "The Practical Side of Municipal Accounting." "Responsibilities of the City's Auditing Officer in Approving Claims," Hon. Frank E. Dorremus, City Comptroller, Detroit, Mich. "Reports of Municipal Auditors, What They Should Show," Hon. Fred E. Carey, City Auditor, Sacramento, Cal. Informal discussion, also consideration of the question, "Is the establishment of a central statistical bureau for the prices of commodities used by cities feasible?"

2:30 p.m. "Recent Improvements in Accounting Systems, the District of Columbia," Hon. Alonzo Tweedale, Auditor, District of Columbia. "The City of New York, Reorganization of the Finance Department," Hon. Frank Smith, Auditor of Accounts, New York City. "The Island of Porto Rico," Hon. George Cabot Ward, Auditor-General, San Juan, P. R.

Third day's session, September 24, 10 a.m. Report of the Committee on Uniform Accounting Under State Supervision, appointed at the Richmond convention; informal discussion on problems of municipal finance. All members are invited to participate. Report of Auditing Committee; Election of Officers.

Fourth day, September 25. Visit to Mammoth Cave. Through the courtesy of the city of Louisville, the delegates will have the privilege of visiting by special train this subterranean wonder ninety miles south of Louisville. A four-hours' journey through the avenues, streams, grottoes and halls of this remarkable work of nature, with its marvelous beauties and strange animal life, will make more real Verne's weird story of a "Journey to the Center of the Earth," and be an experience long to be remembered by those who have not heretofore made the trip.

Empire State Gas and Electric Association.—The annual meeting of this association will be held in the United Engineering Societies Building, 29 West 39th street, on October 7. Among the subjects to be discussed are: Public policy work of the Association; Standards for Gas Service and Standards for Electric Service, taking as a basis the recent rules of the Railroad Commission of Wisconsin; Taxation of Gas and Electric Companies in New York State with a report from the Taxation

Committee; Insurance of Gas and Electric Stations; Review of the Decisions of the Public Service Commissions; Electric Meter Testing, with report of the Meter Committee; Accounting, with report of the Accounting Committee; Amendments to the Constitution and By-laws with a new schedule of annual dues; Affiliation with the American Gas Institute and the National Electric Light Association. All of the details of the programme have not been completed, but it is expected that the meeting will be exceptionally interesting. Charles H. B. Chapin, 134 Nassau street, New York City, is Secretary of the Association.

National Paving Brick Association.—The Board of Directors held a meeting September 10 at the office of W. P. Blair, the Secretary, in the Board of Trade building, Indianapolis. All members were present from various States. The Association has undertaken a plan to bring about what it considers a better construction of brick streets in municipalities throughout the country, and this was the principal subject under consideration. Specifications for brick streets have been prepared by the association, and Mr. Blair said that these specifications were being used as a text-book in the engineering departments of about fifty colleges. This, he said, is doing much good toward bringing about a better construction of streets. There was some talk also with reference to the place for holding the next annual meeting of the Association. This is governed largely by the meeting place of the National Brick Manufacturers' Association. A referendum vote of the members of the latter association is now being taken, and the indications are that Atlantic City will be chosen.

Connecticut State Firemen's Association.—With 237 accredited delegates and department members in attendance, the twenty-fifth annual convention of the Connecticut State Firemen's Association met at Norwich, September 8. President William B. Perkins, of New Haven, presided. The convention began with a half-hour business session in which addresses were made by Mayor Costello Lippitt and President Frederick W. Cary, of the Board of Trade. Officers were elected as follows:

President, James H. Hayes, Bristol; First Vice-president, Hubert F. Potter, of North Norwalk; Secretary, Robert V. Magee, Watertown; Treasurer, Samuel C. Snagg, Watertown; Chaplain, the Rev. Neilson Poe Carey, Norwich. The last three were re-elections.

County vice-presidents were elected in caucus, as follows:

Litchfield, E. J. Kelly, Torrington; Middlesex, George S. Pitt, Middletown; Fairfield, Joseph V. Schupp, East Portchester; New London, Henry A. Stahle, Pawcatuck; Hartford, Anthony F. Bolan, Hartford; Windham, Wade U. Webster, Willimantic; New Haven, William Barry, West Haven; Tolland, John W. Hefferson, Rockville.

Greater New York Taxpayers' Conference.—The Conference has decided to hold a Budget Exhibit, October 4-19, in the City Investing Building, 165 Broadway, New York City, and has issued an invitation to taxpayers, organizations and to the general public to take part in the exhibition. The committee in charge reserves the right to exclude any material offered. Photographs, charts and sentences will be limited to matter immediately bearing upon budget problems. Among the organizations that have been especially invited to make exhibits are the New York Milk Committee, the committees on the Prevention of Tuberculosis, Tenement House and Physical Welfare of School Children, City Club, the Mer-

chants' Association, Hospital Conference, State Charities Aid Association, New York Prison Association, Brooklyn League. It is expected that many suggestions will come in from individual taxpayers showing holes in streets to account for unnecessary paving bills, public baths, whose payrolls are from two to three times too large; public buildings leased for a song, private buildings leased by the city at exorbitant rentals, school children needing medical, ocular and dental attention, etc. Much good to the taxpayers is expected to result from the budget exhibit.

Calendar of Meetings

- September 21-October 12.**
National Association for the Study and Prevention of Tuberculosis.—International Congress, Washington, D. C.—Dr. Henry Barton Jacobs, Secretary, Baltimore, Md., Dr. Joseph Walsh, Philadelphia, Pa. Special Secretary of the Committee on the International Congress.
- September 22-24.**
National Association of Comptrollers and Accounting Officers.—Third annual convention, Seelbach Hotel, Louisville, Ky.—Howard C. Beck, Secretary, 61 McGraw Building, Detroit, Mich.
- September 23.**
Municipal Engineers of the City of New York.—Regular meeting, Engineering Societies Building, 29 West Thirty-ninth street.—C. D. Pollock, Secretary, 29 West Thirty-ninth street, New York City.
- September 23-25.**
New England Water Works Association.—Annual convention, Atlantic City, N. J.—Willard Kent, Secretary, Narragansett Pier, R. I.
- September 24.**
Illinois Mayors' Association.—Third annual convention, La Salle.
- September 28-October 1.**
Pacific Coast Association of Fire Chiefs.—Annual convention, Victoria, B. C.—William Metz, Chief Fire Department, Walla Walla, Wash., President.
- September 30-October 2.**
League of American Municipalities.—Twelfth annual convention, Omaha, Neb.—John MacVicar, Secretary, Des Moines, Ia.
- September 29-30.**
American Public Works Association.—Annual meeting, Asheville, N. C.
- September 29-October 10.**
Sixteenth Annual Irrigation Congress.—Albuquerque, N. M.
- October 5-6.**
Illuminating Engineering Society.—Second annual session, Hotel Walton, Philadelphia, Pa.
- October 5-19.**
Greater New York Taxpayers' Conference.—Budget Exhibit City Investing Building, New York City.
- October 7.**
American Society of Civil Engineers.—Regular semi-monthly meeting, Society House, 220 West Fifty-seventh street, New York City.—Charles Warren Hunt, Secretary.
- October 7.**
Empire State Gas and Electric Association.—Annual meeting, United Engineering Societies Building, 29 West Thirty-ninth street.—Charles H. B. Chapin, 164 Nassau street, New York City, Secretary.
- October 7-9.**
Lakes-to-the-Gulf Deep Waterway Association.—Third annual convention, Chicago, Ill.—W. F. Saunders, Secretary, St. Louis, Mo.
- October 8-10.**
Kansas Gas, Water and Electric Light Association.—Annual meeting, Pittsburg, Kan.—J. D. Nicholson, Newton, Kan., Secretary.
- October 11.**
International Roads Congress.—First convention, Paris, France.—President Lethier, l'Inspecteur General des Ponts et Chaussées.
- October 12-17.**
American Street and Interurban Railway Association.—Twenty-seventh annual meeting, Atlantic City, N. J.
- October 20-23.**
American Society of Municipal Improvements.—Fifteenth annual convention, Hotel Dennis, Atlantic City, N. J.—A. Prescott Folwell, Secretary, 239 West Thirty-ninth street, New York City.
- November 17-19.**
Atlantic Deeper Waterways Conference.—Baltimore, Md.—J. Hampton Moore, President, Philadelphia, Pa.

PERSONALS

ADAM, J. N., Mayor, Buffalo, N. Y., has concluded a visit to Ireland and various places in Scotland, including his native town.

ANDREWS, JOHN, Cleveland, O., for fifteen years Chief of the Fire Department, died September 15. Mr. Andrews retired in 1906, after thirty-three years' service.

BIEBER, SIDNEY, formerly Fire Marshal, Washington, D. C., is seeking by mandamus to be restored to the pension roll for District firemen.

BIGBEE, JOHN, Chief of Police of Cranston, R. I., is ill from blood poisoning, the result of an injury received in service.

BROWNELL, E. E., Consulting Electrical Engineer of Dayton, O., has moved from 1407 East Third street, to 1245 North Main street, Dayton.

BROWNING, J. Wood, Lexington, Ky., has been appointed Police and Fire Commissioner, succeeding Frank L. Smith, resigned.

DICKSON, DR. S. A., Shreveport, La., has been elected Mayor over J. C. Foster by two votes, the winner being supported by anti-prohibitionists.

DIMMICK, J. BENJAMIN, Mayor of Scranton, Pa., has returned to his desk from a vacation at Lake Placid.

HARRINGTON, DR. CHARLES, Secretary of the Massachusetts Board of Health, died at Lynton, Eng. He was a graduate of Harvard and studied at Leipsic, Strassburg and Munich. For fifteen years he had charge of the milk inspection bureau of the Boston Board of Health.

JOHNSON, EDWARD J., City Engineer of Nashua, N. H., has resigned.

MORROW, JAY J., Engineer Commissioner of Washington, D. C., is spending a vacation in a camp near Lake Saranac, N. Y.

NEWALL, F. H., Director of the U. S. Reclamation Service, has sailed for Honolulu, Hawaii, to investigate the water supply and irrigation possibilities of the islands.

NICHOLSON, MAURY, Birmingham, Ala., has been appointed Chief Engineer to succeed Julian Kendrick, resigned. Mr. Nicholson has been assistant engineer of Birmingham and was formerly City Engineer of Knoxville.

RUTHERFORD, WILLIAM, United States Marshal, was shot and killed by Chief of Police C. E. Bryant, after the latter had received a wound in the arm.

SEAMAN, CHARLES K., Perth Amboy, N. J., James C. Rossi and Matt Weint have been appointed members of the City Shade Tree Commission.

STONE, EVERETT E., Chairman of the Water Commission of Springfield, Mass., will retire soon. Since his promotion to be Chief Engineer of Maintenance of Way of the Boston & Albany Railroad, he finds his new duties interfere with service on the commission.

SUTTON, LIEUTENANT JOHN R., Washington, D. C., commander of the harbor police precinct, is taking a vacation at Colonial Beach, where he celebrated his thirtieth anniversary as Harbor Master of the city. Lieutenant Sutton has done notable work in breaking up river pirate depredations; order is so well kept now that arrests are seldom made.

WALKER, C. M., Portsmouth, Va., has been reelected President of the Board of Aldermen.

WOODWELL, JULIEN E., Washington, D. C., has resigned as inspector of electric light plants in the various Federal buildings of the country, under the supervision of the Treasury, to enter a partnership with Louis B. Marks, New York City, in the electrical engineering business.

TRADE NOTES

Cast Iron Pipe.—Chicago: Several small municipal lettings have been awarded. All business in sight is of similar character. Quotations: 4-inch, \$27; 6 to 12-inch, \$26; 16-inch and up, \$25. Birmingham: Following the advance in pig iron, manufacturers have added \$1 a ton to their prices. There are a number of inquiries from Southern cities and the outlook is considered good for the beginning of next year. Quotations: 4 to 6-inch, \$24; 8 to 12-inch, \$23; over 12-inch, average, \$22. San Francisco: A large number of municipal contracts are in prospect. New York: Current demand is for small orders, principally for flanged pipe. Quotations: 6-inch, in car load lots, \$23.50 to \$24.

Lead.—Some weakness is observed in the market and lead has been sold five points below the American Smelting and Refining Company's price. Quotation: 4.525 cents in New York, 4.40 at St. Louis.

Cast Iron Pipe Dividends.—Final adjudication of the right of the United States Cast Iron Pipe and Foundry Company to pay preferred stock dividends out of its "reserve for additional working capital" was made in the New Jersey Chancery Court in Trenton, when Vice-chancellor Howell dismissed the application made by Frederick Bassett, a holder of common stock, who sought to enjoin the payment from this fund of a quarterly preferred stock dividend of 1 3/4 per cent. This quarterly dividend was declared for the last quarter of the company's fiscal year ended May 31. The amount required to satisfy the dividend was \$218,750, while the company's balance sheet, as of May 31, showed \$16,024 to the credit of profit and loss applicable to dividend payments only. The company decided to pay the dividend from its capital reserve fund. Mr. Bassett sought to restrain the company from paying the quarterly dividend on the preferred stock from this source, maintaining that dividends could not be paid from such fund without the consent of the holders of the company's common stock. He succeeded in obtaining a temporary injunction in the New Jersey Court of Chancery against such disbursement, but the case was taken on appeal to the New Jersey Court of Errors and Appeals, where the decision of the lower court was reversed and further consideration of the facts recommended. Vice-Chancellor Howell decided that Mr. Bassett's contention was without equity and should be dismissed.

Water Company Improvements.—Stockholders of the Johnstown Water Company met in special session September 2 and voted unanimously to increase the indebtedness of the company over half a million dollars, from \$210,000 to \$750,000, the entire amount to be expended in extensions and improvements of the local system of domestic water supply. The action has been in contemplation for some time and was in no sense a result of the present emergency situation. Notices of the meeting had been issued to stockholders over two months ago, on July 1, and the subject of extensions had been informally discussed for a long time before that. Among the projects soon to be undertaken will be the construction of reservoirs on the north fork of the Benscreek. Minor improvements and extensions will be carried forward as fast as weather and other conditions permit.

Card Index of Prices.—The Buffalo Meter Co., Buffalo, N. Y., has issued a price list of American and Niagara water meters printed on a card suitable for filing in a card index. In the course of their correspondence with foreign houses they have ascertained that the custom is quite general in other countries for engineers, city officials, jobbers and dealers to keep card catalogues of prevailing prices. The price list is issued to meet this demand and in the hope that they may contribute something towards the inauguration of the system in America.

Natural Gas.—Negotiations are in progress in Pittsburg for West Virginia natural gas properties from which to supply fuel to Washington, D. C., Baltimore and other cities in that district. The property is owned by the Union Natural Gas Corporation, of Pittsburg, of which T. N. Barnsdall, of Pittsburg, is president. It consists of 80,000 acres of gas land in West Virginia, partially developed, and other properties. The Standard Oil Company is said to have offered \$6,000,000 for the property. Officials of the Union Company, it is said, refuse this, considering their holdings worth \$10,000,000. Efforts to get together on price are still being made. Should it secure the property the Standard Oil Company, it is reported, will lay a pipe line from West Virginia to the Atlantic coast.

INCORPORATIONS

Agawam Waterproofing and Conduit Company, New York, N. Y.; general contracting; capital, \$100,000. Incorporators: Harry M. Spence, 2159 83d street, Brooklyn; Edward M. McInnes, 552 West 160th street; Monroe M. Schwarzschild, 47 West 88th street, both of New York.

Beebe Light and Power Co., Beebe, Ark.; capital, \$10,000. Incorporators: J. S. Smith, M. Strickland, G. H. Mills, and others.

Biglerville Water Company, Biglerville, Pa.; capital, \$5,000. Incorporators: W. C. Sheeley, Gettysburg, and E. H. Sachs, Hantersstown.

Cascade Development Company, The Dalles, Ore.; capital, \$100,000. Incorporators: A. W. Mohr and W. A. Johnston, of The Dalles; P. L. Caples, of Portland, to construct power plant west of Hood River.

Engineering and Construction Company, New York, N. Y.; civil, mechanical, electrical and sanitary engineering; capital, \$10,000. Incorporators: Herman M. Underwood, 143 Liberty street; John Marvin, 38 Second street; Richard A. Waite, 81 New street, all of New York.

Greater New York Traction Company, to operate a three-cent fare trolley line in New York City; capital, \$15,000. Incorporators: C. F. Thumm, 60 Wall street; Arthur G. Still, 541 West 158th street; Joseph W. Spencer, 15 William street; Frank S. Burns, Charles M. Koop, John A. Gallagher, 160 Broadway; A. C. Austin, Jr., and E. M. Fuller, 1 Madison avenue, and R. W. Alexander, 42 West 64th street, New York City.

Idlewild Electric Light and Power Company, Federalsburg, Md. Incorporators: John F. Disharoon, J. B. Wright, E. E. Goslin, and others, of Federalsburg, and Hazelton Joyce, of Cambridge.

The Oregon Water and Power Company, Indianapolis, Ind.; capital, \$25,000; to develop water power in the State of Oregon for the purpose of supplying cities, towns and villages with water, heat, light and power. Principal office will be in Indianapolis. Incorporators: Frank M. Fauvre, Wm. E. English and Monroe George.

Peoples Light Company, Corpus Christi, Tex.; capital, \$30,000. Incorporators: Clark Pease, John D. Kennedy, George A. Blucher, Thomas E. Craig.

Penfield Gas Company, Clearfield, Pa.; to supply light, heat and power by means of natural gas. Incorporators: T. W. White, Charles E. Bulf, Geo. R. Woodward, R. A. Cartwright and B. L. Moyer.

Playground Association of Memphis, Memphis, Tenn.; to prepare and promote the preparation of playgrounds at the various parks in the city and in other places. Incorporators: S. C. Scruggs, President; C. H. Raine, Treasurer, and Marlon Griffin, Secretary.

Yeagertown Water Power Company, Yeagertown, Pa.; capital, \$5,000. Incorporators: W. P. Woods, Lewistown; Wallace Wilson, Alexandria, and J. S. Woods, Huntingdon.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage Water Supply and Public Lighting—Fire Equipment and Supplies—Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

To be of value this matter must be printed in the number immediately following its receipt, which makes it impossible for us to verify it all. Our sources of information are believed to be reliable, but we can not guarantee the correctness of all items. Parties in charge of proposed work are requested to send us information concerning it as early as possible; also corrections of any errors discovered.

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
STREET IMPROVEMENTS				
Missouri	Kansas City	Sept. 24, 11 a.m.	Asphalt and brick paving, etc., various streets	J. L. Darnell, City Engineer.
New Jersey	Newark	Sept. 24	Wood block paving, 4,600 sq. yds. on 6-in. concrete, etc.	M. R. Sherrerd, Chief Engineer.
New York	West Seneca	Sept. 24, 4 p.m.	Bldg. 14,000 sq. ft. concrete walks, etc., grading	Edw. H. Cosgrove, Town Clerk.
Ohio	Marietta	Sept. 24	Brick paving and curbing several streets	Jas. F. Hovey, City Clerk.
Pennsylvania	Yeadon	Sept. 24	Laying sidewalks, curbs and gutters in Borough	T. H. Dann, Boro. Secy.
Ohio	Lisbon	Sept. 24	Bldg. road 1,200 ft. long in town of Hanover	Mayor, Town of Hanover.
Ohio	Toledo	Sept. 24	Paving Scottwood Avenue	Reynold Voit, Sec'y Bd. Pub. Serv.
Illinois	Charleston	Sept. 25, 1 p.m.	Constructing three gravel roads	A. J. Ward, Com'r Highways.
Indiana	Muncie	Sept. 25	Resurfacing streets with brick; cost, \$8,000; new bids.	J. A. Jackson, City Clerk.
Ohio	Cincinnati	Sept. 25, noon	Improving Rich road; specifications No. 788	Stanley Struble, Pres. Co. Com'rs.
Ohio	Massillon	Sept. 25	Paving Erie St., etc.	Board of Public Service.
Ohio	Martins Ferry	Sept. 25	Furn. paving brick or block for Hickory, 7th to 10th St.	E. D. Lash, Clk. Bd. Pub. Serv.
Illinois	Chicago	Sept. 26	Furn. and paving W. Kinzie St. No. 2 granite block	John J. Hanberg, Com'r Pub. Wks.
Minnesota	Grand Rapids	Sept. 26, 10 a.m.	Constructing two roads and one highway	M. A. Spang, County Auditor.
Ohio	College Hill	Sept. 28, noon	Grading and macadamizing Woodward Ave., Linc. to Ferris	F. R. Strong, Village Clerk.
Ohio	East Liverpool	Sept. 28, noon	Grading Ambrose Ave.; \$5,000 check	A. S. Hughes, Clk. Bd. Pub. Serv.
West Virginia	Wellsburg	Sept. 28, noon	Paving 4 streets for city	E. A. Sheets, Chm. St. Com'n.
Massachusetts	Fort Andrews	Sept. 28, 10 a.m.	Bldg. macadam roads, concrete walks, etc.	Capt. Ira L. Fredenhall, Q. M.
Indiana	Frankfort	Sept. 29	Constructing 25 district gravel roads	Clinton County Com'rs.
Ohio	Scio	Sept. 29, noon	Brick paving, 18,000 sq. yds., curb drains, etc.	Harry E. Johnson.
Virginia	Portsmouth	Sept. 29, 8 p.m.	Paving 14,700 sq. yds., any material; 7,800 ft. 5-in. granite curb	Bascom Sykes, City Engineer.
Missouri	Kirksville	Sept. 29, 5 p.m.	Vit. brick paving, 19,800 sq. yds.; conc. curb and gutter, 9,500 feet	J. C. Carothers, City Clerk.
Ohio	Cleveland	Sept. 30, noon	Paving Clark Ave. S. W. bridge over B. & O. R. R.	W. J. Springborn, Pres. B. P. S.
New York	New York	Oct. 1, 3 p.m.	Repeating cement walks, small parks, Boro Manhattan	Henry Smith, Pres. Park Bd.
Pennsylvania	York	Oct. 1	Bldg. 5 state roads, 30,682 ft. long, in York County	Jos. W. Hunter, State Highway Commissioner, Harrisburg.
Ohio	Postoria	Oct. 2, noon	Grading, etc., mile of 2 roads, London twp.	J. P. Dreitzel, Clk. London Twp.
Ohio	Dayton	Oct. 2	Comb. curb and gutter, grading and graveling streets, etc.	J. C. Ely, Pres. Bd. Pub. Serv.
Georgia	Atlanta	Oct. 3, 3 p.m.	Bldg. 20,000 to 25,000 sq. yds. macadam, P. de Leon Ave.	D. Lee Wardroper, Candler Bldg.
Indiana	Anderson	Oct. 3	Constructing about 45 miles of gravel roads	Wm. T. Richards, County Aud.
Ohio	Lorain	Oct. 3, noon	Grading, curbing and macadamizing, Clinton St.	A. W. Thomas, Clk. Bd. Pub. Serv.
Pennsylvania	No. Braddock	Oct. 3, 10 a.m.	Imp. Maple and Miller Sts., inc. 150 cu. yds. grading, 450 sq. yds. brick paving, 370 sq. yds. block stone; 740 ft. curb, etc.	C. A. Stewart, Boro. Engineer.
Indiana	Liberty	Oct. 5, 2 p.m.	Bldg. gravel road, 11,612 ft. long in Harmony twp.	Clinton Gardner, Co. Auditor.
Indiana	Crown Point	Oct. 5	Constructing Ruff road No. 1, North Township	Chas. A. Johnson, County Auditor.
Indiana	Madison	Oct. 6, 1 p.m.	Macadamizing, grading, etc., roads Graham Twp.; \$22,348	G. F. Crozier, County Auditor.
New Jersey	Bayonne	Oct. 6, 8 p.m.	Bitulithic or asphalt block paving, 73,800 sq. yds.	Pierre Garven, Mayor.
Pennsylvania	Clearfield	Oct. 6	Bldg. 14,175 ft. State road in Decatur Township	State Highway Dept., Harrisburg.
Indiana	Tipton	Oct. 9	Constructing one mile of gravel road	J. F. Barlow, County Auditor.
Ohio	Carthage	Oct. 10, noon	Grading, draining, etc., Fair Grounds, inc. 9,456 cu. yds. grading, 1,035 ft. 15-in. sewer pipe, 845 ft. 12-in., etc.	Hamilton Co. Agr. Soc., Wiggins Block, Cincinnati.
Ohio	Oakley	Oct. 16, noon	Constructing cement sidewalks	Oscar Kosche, Village Clerk.
WATER SUPPLY				
Pennsylvania	Juniata	Sept. 24, noon	Mat. and labor for reservoir, inc. 3,070 cu. yds. excavation, 850 cu. yds. concrete, 535 sq. yds. cobble, 2,520 ft. 16-in. c. i. pipe, 650 ft. 8-in. c. i. pipe, valves, etc.	H. C. Gwin, Boro. Eng'r.
Nebraska	Kimball	Sept. 25	Constructing a water system, complete	W. J. Davies, City Clerk.
Ohio	Cincinnati	Sept. 25, noon	Furn. lime and sulphate of iron for filtration plant	Aug. Herrmann, Pres. Com. W.W.
Indiana	Walcottville	Sept. 25, 1 p.m.	Constructing water works for town	Board of Town Trustees.
Illinois	Chicago	Sept. 26	Furn. mat. and bldg. steam and exhaust lines to elec. engines, pump station	John J. Hanberg, Com'r Pub. Wks.
Illinois	Decatur	Sept. 28	Furn. 225 tons 6 to 30-in. c. i. pipe; 15 valves; also bldg. 2 concrete-steel intakes; 2 concrete or brick wells	Albert Leach, City Clerk.
Minnesota	Albert Lea	Sept. 28, 8 p.m.	Constructing 2,700 ft. 6-in. water mains	Wm. Barneck, City Eng'r.
Minnesota	Bemidji	Sept. 28, 8 p.m.	Bldg. 120-ft. steel tower and 100,000-gal. tank	M. D. Stoner, City Engineer.
Minnesota	Deep River	Sept. 28, 8 p.m.	Bldg. 1,335 ft. 6-in. c. i. water pipe	Will Taylor, Village Recorder.
New York	New York	Sept. 28	Furn., etc., pumps, metallic hose, valves, etc., Dept. Docks	Allen N. Spooner, Com'r Docks.
New York	Allegany	Sept. 29, 8 p.m.	Bldg. W. W. system, inc. 4 miles 10, 8, 6 and 4-in. c. i. pipe; 50 fire hydrants, 40 gate valves; 2 gas engines and triple power pumps, brick pumping station, etc.	F. W. Forness, Jr., Pres. Bd. Trus.
Ohio	East Liverpool	Sept. 30	Furn., etc., 2 hori. boilers, 80 h.p. each, etc., for W. W.	A. S. Hughes, Clk. Bd. Pub. Serv.
Kansas	Winfield	Sept. 30, 3 p.m.	Furn. material and install. water works; 4 separate bids.	Chas. M. Wallace, Mayor.
New Jersey	Haddonfield	Oct. 1	Bldg. new municipal water plant; well supply; cost, \$100,000	Councilman Brown, Chm. Com.
Massachusetts	Wrentham	Oct. 1, 8 p.m.	Bldg. wood or metal roof on stand pipe	E. F. McClellan, Sec'y Water Bd.
New York	Albany	Oct. 1, noon	Bldg. reservoir, dam, etc., 2 contracts; \$1,014,525 and \$1,000,219	Fred'k Skene, State Eng'r.
Kansas	Kiowa	Oct. 2, 5 p.m.	Bldg. system of water works and electric lights; also furn. c. i. pipe, two 500-gal. and one 200-gal. pumps, 70,000-gal. tank, 100 ft. high, etc.	C. H. McBrayer, City Clerk.
Wisconsin	Milwaukee	Oct. 2	Furn. and erect. 12,000,000-gal. pumping engine; cost, \$75,000	C. J. Poetsch, Chm. Bd. Pub. Wks.
Oregon	Astoria	Oct. 2, noon	Bldg. 20,000,000-gal. reservoir, inc. 165,000 cu. yds. earth excavation and embankment, 3,100 cu. yds. rein. concrete, etc.	C. S. Wright, Chm. Water Com'n.
North Dakota	Grand Forks	Oct. 5	Constructing water main in portion of De Mers Ave.	W. H. Alexander, City Auditor.
Louisiana	Harrisonburg	Oct. 5, noon	Drilling 4-inch artesian well	H. W. Bethard, Sec'y Police Jury.
Arkansas	Hope	Oct. 6	Furn. mat. and bldg. water system, inc. 70 x 35 x 12-ft. rein. concrete reservoir; 900 tons c. i. pipe, hydrants, etc.	E. S. Greening, Jr., Sec. W. W. Dist. No. 1.
New Jersey	Haddonfield	Oct. 6, 8 p.m.	Constructing water works system, inc. 11 miles c. i. or other approved pipe, specials, etc.; stand pipe, 25 x 110 ft; laying all pipe lines; 2,000,000-gal. pumping units; steam gas producer or gasoline, and two or more artesian wells	J. Morris Roberts, Mayor.
Oklahoma	Otoe	Oct. 7, 2 p.m.	Bldg. tank and tower, water mains, etc., Indian School	Supt. Indian School.
Indiana	Evansville	Oct. 12, 7 p.m.	Constructing municipal filter plant; cost, \$225,000	W. M. Madden, Clk. Water Board.
Ohio	Chagrin Falls	Oct. 14, noon	Laying 4-in. water pipe, etc., in 4 streets	R. W. Stoneman, Clk. Trus. P. A.
Brit. Columbia	Vancouver	Oct. 14, 4 p.m.	Supplying c. i. pipes, steel pipes, and Ludlow Water Hydrants	W. McCuen, City Clerk.
Texas	Houston	Oct. 19, 3 p.m.	Install. complete, 15,000,000-gal. pumping engine	H. B. Rice, Mayor.
New Jersey	Verona	Oct. 28, 8 p.m.	Constructing system of water works for borough, inc. 1,000 tons c. i. pipe, 20 tons specials, 87 fire hydrants, 152 valves, and 9 miles of pipe laying	Wm. A. Smith, Chm. Water Com.
New Jersey	Passaic	Oct. 30, 8 p.m.	Laying dis., etc., 37 miles 6 to 20-in. pipe, hydrants, etc.; furn. and delivering same; furn. new water supply, 3 to 12,000,000 gals. per day from wells or surface streams	Geo. K. Rose, Chm. Water Com.
New York	Cohoes	Nov. 2	Plans, specifications and estimate of mechanical filtration plant	A. T. Kniffin, Supt. W.W.

SEWERAGE

Minnesota	St. Paul	Sept. 24	Bldg. sewer in Cook and Bay streets, and Winslow avenue	R. L. Gorman, Clk. Bd. Pub. Wks
Pennsylvania	Dunmore	Sept. 24	Constructing sewers, Sec. N; cost, \$6,500	M. P. Mitchell, Engineer.
Oklahoma	Chickasha	Sept. 24, 2:30 p. m.	Bldg. 23,000 lin. ft. 8 in. clay pipe laterals; 48 manholes, 18 flush tanks; plans by E. E. Colby, City Engr.	Joe Dews, City Clerk.
Arkansas	Newport	Sept. 25	Constructing \$40,000 sewer system	Lund & Hill, Little Rock, Eng'rs.
Mississippi	Meridian	Sept. 25	Constructing the Apperson sewer	W. T. Wetmore, City Engineer.
Ohio	Massillon	Sept. 25, noon	Constructing sanitary sewers in six streets	Board of Public Service.
Illinois	Chicago	Sept. 26	Bldg. brick and tile sewer in portion of Lawrence street	John J. Hanberg, Com'r Pub. Wks.
Iowa	Fort Dodge	Sept. 28, 5 p. m.	Bldg. 200 ft. 10-in. c. i. pipe and 150 ft. 8-in. vit. pipe sewer	K. E. Beal, City Clerk.
West Virginia	Wallsburg	Sept. 28, noon	Bldg. 1,420 ft. 20-in. t. c. pipe, etc., 26th and 27th streets	E. A. Sheets, Chm. St. Com.
Dist. of Col'bia	Washington	Sept. 28, noon	Re-bldg. portions Rock Creek and B street, intercepting sewer	Jay J. Morrow, Eng'r Com'r.
Ohio	Jackson	Sept. 28, noon	Bldg. 1.4 miles main sanitary sewer; estimate, \$10,000	J. W. Turner, Village Eng'r.
New York	West Point	Sept. 29, noon	Constructing brick storm sewer	Quartermaster.
Ohio	Oxford	Sept. 29, noon	Bldg. sanitary sewers: 40,700 ft. 8-in., 7,000 ft. 10-in., 10,000 ft. 12-in., 3,500 ft. 15-in. pipe; 120 manholes, 29 lamp holes, 29 flush tanks; exc., 11,410 lin. ft., under 5 ft.; 22,682 ft. 5-7 ft.; 11,815 ft., 7-9 ft.; 2,540 ft., 9-11 ft.; 2,070 ft. 11-13 ft.; 870 ft. 13-15 ft., etc.	D. P. Beaton, Clerk of Council.
Ohio	Cadiz	Sept. 29	Bldg. sewers, paving, etc., Main and College Sts., and Ramley rd.	Village Clerk.
Pennsylvania	Norristown	Sept. 30, 8 p. m.	Bldg. sanitary sewers: 28,837 ft. 8-in., 2,425 ft. 10-in., 1,476 ft. 12-in., 11,000 ft. 8-in. laterals; 123 manholes, 34 flush tanks	S. Cameron Corson, Boro. Eng'r.
Pennsylvania	Danville	Sept. 30, noon	Bldg. sewage disposal plant; also 6-ft. concrete main	Dr. H. B. Meredith, State Hosp.
Ohio	Dayton	Oct. 2	Bldg. storm water sewer in Findlay St., etc.	W. A. Budroe, Clk. Bd. Pub. Serv.
Kansas	Lawrence	Oct. 5, 5 p. m.	Bldg. 6,000 ft. 12-in. vit. sanitary sewer, 4 manholes; also 1,500 ft. 15-in. comb. sewer, 2 manholes	Holland Wheeler, City Engineer.
Arkansas	Hope	Oct. 6	Furnish material and installing sanitary sewer system, inc. 102,000 ft. 6-15-in. vit. pipe; disposal works, manholes, etc.	J. A. Oraberg, Jr., Goodwyn Bldg., Memphis, Tenn., Eng'r.
Ohio	Corlett	Oct. 6, noon	Constructing sewers in three streets	H. W. Jantzen, Village Clerk.
Iowa	Cherokee	Oct. 6, 8 p. m.	Bldg. 8-in. sanitary sewer in Block No. 1, Millard Add.	W. Shardlow, Jr., City Clerk.
Ohio	Oakley	Oct. 6, noon	Bldg. sewer in Webster Ave., Clark St. and Madison Pike	Oscar Kosche, Village Clerk.
Ohio	Carthage	Oct. 10, noon	Constructing sewers, etc., in Hamilton Co. Fair Grounds	H. Lee Early, Pres. Bd. Agr.
Ohio	Logan	Oct. 13	Bldg. sewers on North St. and Zanesville road	F. C. Grove, Village Clerk.
Oklahoma	Chickasha	Oct. 1, 2:30 p. m.	Bldg. 5,410 ft. 30 in. brick or concrete pipe; 1,915 ft. 42-in. brick or concrete; 120 ft., 10-in vit. pipe; 16 manholes, 2 catch basins; 20,000 cu. y's. excess back fill; E. E. Colby, City Engr.	Joe Dews, City Clerk.
Maryland	Baltimore	Oct. 14, 11 a. m.	Constructing sewage disposal works; west low level interceptor, force main sewer and force main; Sanitary Contract, Nos. 30, 31, 32 and 33, as advertised Sept. 23	J. Barry Mahool, Pres. Bd. Awards.
Pennsylvania	Wilkes-Barre	Oct. 26, noon	Bldg. mile of circ. brick sewer; B. K. Finch, City Engineer	Fred H. Gates, City Clerk.
Arkansas	Newport	Nov. 1	Constructing \$40,000 sewage system	Lund & Hill, Little Rock, Eng'rs.
Ecuador	Guayaquil	Dec. 1	Constructing sewerage system	Int. Bur. of Am. Rep., Wash'tn, D. C.

BRIDGES

Mississippi	Meridian	Sept. 25	Constructing the Eighth Street bridge	W. T. Wetmore, City Engineer.
Ohio	Alliance	Sept. 25	Bldg. culvert and retaining wall, Liberty and South streets	County Auditor, Canton.
Ohio	Cincinnati	Sept. 25, noon	Bldg. bridge over So. Fork, Taylor's Creek, Green twp.	Fred. Dreihis, County Clerk.
Ohio	Cleveland	Sept. 26, 11 a. m.	Bldg. bridge abutments, report 2,031, Olmstead twp.	A. B. Lea, County Surveyor.
Pennsylvania	Norristown	Sept. 26	Constructing iron and concrete bridge over Stony Creek	Clerk, County Com'rs.
Indiana	Terre Haute	Sept. 26, 11 a. m.	Bldg. bridge, culvert and repairing bridge	Nathan G. Wallace, Co. Auditor.
Indiana	South Bend	Sept. 28, 11 a. m.	Repairing Orphans' Home bridge	John W. Harbou, County Auditor.
Ohio	Philo	Sept. 28, noon	Bldg. concrete abutment at West end swing bridge	L. E. Brelsford, County Aud.
Ohio	St. Clairsville	Sept. 28, 1 p. m.	Bridge work for County	A. W. Beatty, County Auditor.
Minnesota	Little Falls	Sept. 29, 1 p. m.	Bldg. bridge over Crow Wing river, with plans, etc.	Wm. A. Butler, County Auditor.
New Jersey	Trenton	Sept. 29	Bldg. steel-concrete bridge, rein. concrete culvert, iron pipe culvert and 2 retaining walls	W. Scott Taylor, Dir. Freeholders.
Nebraska	Sidney	Sept. 30, 11 a. m.	Bldg. pile and stringer bridge over No. Platte river, near Irving	H. T. Doran, County Clerk.
Illinois	Chicago	Sept. 30	Exc. Sec. 5 No. Shore Channel; also bridge work	I. J. Bryan, Clk. San. Dist.
Ohio	Ashland	Sept. 30, noon	Bldg. W. E. Paulin bridge; 50 ft. steel super., stone abut., etc.	C. W. Westover, Co. Aud.
Ohio	Cleveland	Sept. 30, 11 a. m.	Bldg. concrete bridge, also concrete culvert	A. B. Lea, County Surveyor.
New York	Albany	Oct. 1, noon	Bldg. 5 steel superstructures for highway bridges	F. C. Stevens, State Supt. Pub. Wks.
Kentucky	Stanford	Oct. 1	Bldg. iron or steel bridge, two 32-ft. spans, 16 ft. wide	G. B. Cooper, County Clerk.
Ohio	Cincinnati	Oct. 1, noon	Improving Eighth St. viaduct; \$1,000 check	John J. Wenner, Clk. Bd. Pub. Ser.
Washington	Colville	Oct. 2, 10 a. m.	Bridging, grading, etc., State Road No. 2, Stevens County	State Highway Bd., Olympia.
Ohio	Cleveland	Oct. 3, 11 a. m.	Bridge work for County; report No. 2047	A. B. Lea, County Surveyor.
Oklahoma	Pawhuska	Oct. 3	Bldg. 7 hwy. bridges; any material; also piers, etc.	W. M. Sloan, County Clerk.
Ohio	Toledo	Oct. 5, 10 a. m.	Bldg. abutments for 2 bridges; repairing bridge	L. B. Bailey, Chm. Co. Comrs.
Oklahoma	Pawhuska	Oct. 5, 3 p. m.	Bldg. 7 highway bridges	W. M. Sloan, County Clerk.
Texas	Austin	Oct. 5, noon	Bldg. rein. concrete bridge of most modern type, 940 ft. long	J. D. Lindsay, County Clerk.
Oklahoma	Chickasha	Oct. 5, noon	Bldg. 20 bridges, about 1,327 lin. feet bridging and substructure and 718 lin. ft. pile approach	John W. Hornsby, County Judge.
Ontario	L'Original	Oct. 6, noon	Bldg. 115-ft. iron span; also concrete or stone work	Abbott Johnson, County Clerk.
Illinois	Ottawa	Oct. 6, 7 p. m.	Bldg. sub and superstructure of Illinois river bridge	James F. Farrell, Mayor.
California	Stockton	Oct. 6	Bldg. Hunt bridge, \$9,000; Paradise Cut bridge, \$17,000	F. E. Quail, County Engineer.
Indiana	Elkhart	Oct. 6, 9:30 a. m.	Bldg. steel leg bridge, 16-ft. roadway, 16-ft. span, Union twp.	County Auditor.
Minnesota	Two Harbors	Oct. 6, 10 a. m.	Bldg. 80-ft. span steel bridge over Beaver river; \$4,500	John P. Paulson, County Auditor.
Dist. of Col'bia	Washington	Oct. 8, 11 a. m.	Bldg. single-leaf railway rolling lift bridge at navy yard	R. C. Hollyday, Navy Dept.
Kansas	Manhattan	Oct. 9	Bldg. 60, 70 and 100-ft. bridges, 2 plank floors; one, concrete	Geo. H. Hungerford, County Clerk.
Ohio	Cincinnati	Oct. 9, noon	Constructing bridge for County; Spec. No. 789	Stanley Struble, Pres. Co. Com'rs.
Ohio	Cincinnati	Oct. 12, noon	Bldg. super. viaduct from 8th to 3rd St. for railway	Cinc. So. Ry., Ingalls Bldg.

LIGHTING AND ELECTRICITY

Ohio	Portsmouth	Sept. 24, noon	Lighting streets, alleys, etc., for 3, 6 or 10 years	M. W. McMahon, Clk. B. P. S.
Illinois	Chicago	Sept. 24	Furn. and installing electric machinery and turbine waterwheel	I. J. Bryan, Clk. Bd. Trus. San. Dist.
Dist. of Col'bia	Washington	Sept. 24	Furn. dynamos for Isthmian Canal Com.	Capt. F. C. Boggs, U. S. Army.
Iowa	Hartley	Sept. 24	Installing electric light plant, inc. gas producer, gas engine, dynamos, switch board, storage battery and pole lines	E. B. Rich, Ft. Dodge, Engineer.
Ohio	Minerva	Sept. 24, 7 p. m.	Furn. 150 h. p. boiler, 150 lbs. steam pressure for light plant	L. E. Weber, Sec'y Bd. Pub. Serv.
Ontario	Toronto	Sept. 28, 6 p. m.	Installing transformer equipment	Adam Beck, Hydro. Elec. Pwr. Com.
Manitoba	Boissevain	Sept. 28, noon	Furn. electric light plant and all equipment; gas producer plant or steam plant as alternative	G. C. Smith, Town Clerk.
Wisconsin	Cashton	Oct. 1	Constructing \$10,000 electric light plant	S. G. Reque, Westby, Eng'r.
Kansas	Kiowa	Oct. 2, 5 p. m.	Constructing electric light and water system; also generator switch-board, motor transformers and arc lamp, etc.	Burns & McDonnell, K. C. Mo., Engrs.
Brit. Columbia	Victoria	Oct. 5	Supply and install elec. equip.; also steam driv. pump equip.	W. W. Northcott, City Pur. Agent.
Porto Rico	Ponce	Oct. 15	Constructing electric light plant; approx. surface, 134 hectares, length of sts., 34 kilo.; approx. \$18,000 to \$25,000, 70 arc lights, 6 amp.; 20 incan.; 187 watts; 300 of 32 c.p., 100 18 c.p., 1,500 to 2,000 kilo. for pub. bldgs.	Blass C. Silva, City Engineer.
New York	Oneonta	Oct. 20, 8 p. m.	Lighting sts., 100 arc lights, 2,000 nominal candle-power, to burn all night, 5 years or 2 1-2 years from March 1, 1909	Henry D. McLawry, Village Clerk.

MISCELLANEOUS

Dist. of Col'bia	Washington	Sept. 24	Furn. hose for Isthmian Canal Commission	Capt. F. C. Boggs, U. S. Army.
New York	Buffalo	Sept. 24	Coal and ash handling equipment for pumping station	F. G. Ward, Com'r Pub. Wks.
Maryland	Baltimore	Sept. 25, 11 a. m.	Competitive designs for truck house	Edw. D. Preston, Insp. of Bldgs.
Dist. of Col'bia	Washington	Sept. 28, 10:30 a. m.	Elec. indus. ry., inc. 15,600 ft. track, 12 elec. locos., 24 cars	Purchasing Of., Isth. Canal Com'n.
Pennsylvania	York	Sept. 30	Grading 4 1-2 miles railway line; 80,000 cu. yds.	L. C. Mayer, Ch. Engr., York Ry. Co.
New York	Brooklyn	Sept. 30	Furnishing material and constructing gates, inclosing wheel pit for Gowanus flushing tunnel in Boro.	Bird S. Coler, Boro. Pres.
Arkansas	Harrisburg	Oct. 5	Plans, etc., for Boone County Court House	J. B. Curnutt, R. F. D. No. 2.

STREET IMPROVEMENTS

Annisston, Ala.—Plans are under consideration for the construction of a great boulevard and public highway throughout the county.—Address Chas. W. Thatcher.

Pine Bluff, Ark.—Council has been presented a petition asking it to create a new improvement district to be known as Paving District No. 25.

Los Angeles, Cal.—A survey has been started for first great boulevard to be built extending from this city to Long Beach.

Oakland, Cal.—The Mayor has approved ordinance providing for an appropriation of \$4,500 for resurfacing a portion of East 12th street.

San Diego, Cal.—Survey has been completed for new coast route boulevard to be over sixty miles in length and to be constructed and completed as soon as possible.

Property owners have filed protests against proposed paving of K street between Sixth and Sixteenth streets.

San Francisco, Cal.—It is recommended that funds be placed at the disposal of the Finance Committee of Council to be used for the repaving of Kearny street.

Santa Barbara, Cal.—The County Supervisors will expend \$1,265,000 in improving county roads.—Address County Auditor.

Washington, D. C.—The Commissioners have an order directing the resurfacing of Riggs road from Rock Creek Church road to the district line.

Gainesville, Fla.—Plans are under way for improving the roads in this section; the people in the Newberry precinct are particularly interested.

Albany, Ga.—The Commissioners of Roads and Revenues of Doherty County will improve roads; \$30,000 fund is available for commencing work at once.

Atlanta, Ga.—President Asa G. Candler of the Chamber of Commerce is interested in the good roads movement.

Brunswick, Ga.—An election will be held September 26 to decide the question of issuing \$175,000 in bonds for improving water works, sewers and streets.

Valdosta, Ga.—Council has authorized the Street Committee to proceed at once to macadamize Patterson street, north, Hill avenue, Central avenue, and Ashley street; work will shortly begin.

East St. Louis, Ill.—Council has passed an ordinance for the improvement of 26th street at a cost of \$25,900.

Lincoln, Ill.—Council granted permission to pave Kickapoo street from the north line of Broadway to the north line of Pekin street with a brick block pavement on a concrete foundation; the petition was signed by Morris Emmerson, the Scully interests, Leonard Miller, Mary C. Hill for Hanger Bros., D. H. Harts, Sr., J. W. Collins, E. W. Bates and Sarah Ratekin.

Moline, Ill.—The Board of Local Improvements met to decide upon the Eighteenth and Nineteenth street and First avenue paving improvement and after listening to the objections of property holders decided to hold its decision temporarily; the objection is not against the improvement as much as it is against certain parts of it, the residents wanting several alterations made in the specifications.

Quincy, Ill.—The Board of Local Improvements has passed resolution for the paving of Kentucky street from 12th to 18th streets.

Anderson, Ind.—It is probable that Council will pass favorably on the petitions presented for paving of streets leading into the city with brick; petition to pave West Eighth street is being considered.

Indianapolis, Ind.—The Board of Public Works will receive bids for improving certain streets by paving with asphalt, brick, stone or wooden block; address Clerk of the Board of Public Works.—Blaine H. Miller, City Engineer.

Logansport, Ind.—Voters from Eel Township have petitioned Council for the paving of the road out past Spencer Park.

Muncie, Ind.—Council has adopted resolutions granting the consent of the city to the improvement of certain streets by the County Commissioners; the paving is to be done at the expense of the township.

New Albany, Ind.—Petition has been presented to Board of Public Works asking for the improvement of East Fifth street from Elm street to Culbertson avenue with vitrified brick; a petition was also presented asking for repairs to pavement on Chartres street.

Portland, Ind.—The Commissioners of Jay County will soon ask for bids for the construction of the Gardner Gravel Road between Jackson and Penn Townships.

Valparaiso, Ind.—The citizens are interested in a project for good roads throughout this section.

Vincennes, Ind.—That the people throughout the county are heartily in favor of gravel roads was demonstrated by

the election in Harrison Township, when the proposition for the making of five gravel roads was carried in each of the four precincts by a majority of three to one; the township has up to the present been without hard roads; the viewers of the township decided to build seventeen miles of gravel road which were voted on as follows:

Road No. 1, the Vincennes Monroe County road, ten miles to be improved, seven and a half miles from Monroe City to the Palmyra Township line and two and a half miles on the Petersburg end from White river at Stork's ferry toward Monroe City.

No. 2, the Vincennes and Lower Petersburg road, two and a half miles from near the Jenkins school house to a point near the Herman church. No. 3, the Vincennes White river, or Main street road, one and three-quarters miles. No. 4, the Pond Creek, one and three-quarters miles. No. 5, the Monroe City and Wheatland road, one and an eighth miles long.

Viewers filed supplemental report with the County Commissioners in gravel road petition of Martin Wampler, et al.; same was approved and the Auditor was ordered to give notice to contractors for October term; road petition of E. G. Purcell et al., amended report of viewers was presented; in the gravel road petition of August Herman et al. petitioners filed confirmed copy of Common Council of City of Vincennes, consenting to making improvements petitioned for and report of engineers and viewers approved and Auditor ordered to give notice to contractors; in the gravel road petition of H. D. Hinkle et al. reviewers filed report which was continued until the October term; C. B. Kessinger et al. presented a petition for gravel road, and made proof of posting and mailing.

The Board of Works has adopted a resolution calling for the improvement of Sycamore street from Schley street to the Terre Haute road by putting down concrete sidewalk and stone curbing on both sides of the street.

Davenport, Ia.—Plans are under way to construct a highway from Kirkwood boulevard at Bridge avenue to Camp McClellan. The cost will amount to considerable, as it will take a large quantity of dirt to fill the ravine.

Mason City, Ia.—Improvements to roads and parks in this city are being discussed. Mayor McConlogue is interested.

Topeka, Kan.—Plans are being made for circulating a petition for the repaving of West Eighth street.

Wellington, Kan.—Council has adopted a resolution for the paving with vitrified brick of Washington avenue, a distance of ten blocks.

Lexington, Ky.—In addition to ordinances ordering the construction of concrete walks on different streets in the fire limits, one also passed the Board of Aldermen providing for the construction of similar walks on certain portions of Constitution and Short street and Walton avenue for the purpose of testing the powers of the Council to compel the construction of the walks outside of the fire limits.

New Orleans, La.—Captain Hardee, City Engineer, is making ready for the work incidental to the paving of a number of streets, and Council has already passed upon the specifications providing for the paving of thirty-four separate pieces of pavement; all the paving petitions carry instructions to the City Engineer to prepare plans, etc., and the Comptroller to advertise for bids for paving, and the first batch is in the hands of the City Engineer, who will send a batch every now and then, so that there may be no crowding of paving measures. It will be necessary for the Engineer to have copies of the specifications for the various pavements to be bid upon, and these are now being prepared. The purpose of the Engineering Department will be to have the paving contracts spread out; they will take all sorts of range, including asphalt, chert, gravel, small and large block, vitrified brick, graniteoid, in fact, any and all kinds of pavement; the Comptroller will be advertising shortly and new paving be inaugurated in a month or so.

St. Francisville, La.—Plans are under way for a model road to be constructed soon in this section between Jackson, La., and McManus Station.

Sulphur, La.—S. M. Lyons is interested in plans which are under way for extensions and improvements to be made to the roads and highways throughout this section.

Baltimore, Md.—Contracts are to be awarded soon by the State Roads Commission, T. C. Bowerman, Union Trust Building, for new State highway, on the Denton-Greensboro road and along the Lewis Trice road between American Corners and Federalburg.

The Board of Public Improvements has approved ordinance for paving of Dauphin

street between Eutaw place and Linden street and Wilson street between Park avenue and Bolton street.

Specifications for paving Fourth avenue, between Roland and Chestnut avenues, have been approved by the Board of Works. Bituminous concrete, the new material which was recently inspected by Mayor Mahool, City Register Thomas and City Comptroller Hooper, is put in competition with sheet asphalt, asphalt blocks, bitulithic and vitrified brick.

Councilman Binswanger's ordinance appropriating \$10,000 for the paving of Dolphin street, between Eutaw Place and Linden avenue, and Wilson street, between Park avenue and Bolton street, has been approved by the Board of Public Improvements; the money is to be taken from the tax levy for 1909.

Auburn, Mass.—Plans are under way for improving and repairing the State highway here.

Danvers, Mass.—The question of raising funds as soon as possible for improvements to roads and highways is being discussed; Surveyor Roberts of this place is interested.

Turners Falls, Mass.—At a special town meeting plans were discussed for improvements to highways.

Laurium, Mich.—The Village Council is considering the matter of paving Third street from Hecla street to Boundary street with graniteoid.

Mason, Mich.—Plans and specifications have been prepared for the paving of Main and Ash streets with brick.

Minneapolis, Minn.—The State Highway Commission recently discussed plans for new Belle Plaine highway; \$30,000 is to be appropriated for this purpose.

Virginia, Minn.—The plans and specifications for cement sidewalks around the public library building prepared by the City Engineer were accepted by the Council and the City Clerk was instructed to advertise for bids for construction of the walks.

Greenville, Miss.—The issuing of \$100,000 bonds for road improvements in Washington County is contemplated.

St. Louis, Mo.—Plans are under way for improving the streets and roads throughout this city and vicinity.—W. B. Dryden, Secretary Board of Public Improvements.

Butte, Mont.—Resolutions were passed for paving Iron street from Wyoming to Utah and Aluminum from Utah to Arizona, and grading Excelsior from Antimony to Waukesha. Resolutions were introduced for a change of grade on West Silver, to establish a grade on Broadway at the corner of Henry, to annul the ordinance opening Park alley from Dakota to Wyoming. Bids were ordered on grading Woolman from Emmet to Henry and Silver from Crystal to Excelsior.

Omaha, Neb.—The question of improvements and extensions to roads in this city and improvements to North Central Boulevard are being discussed.

Newport, N. H.—The City Clerk has been instructed to call a special meeting to discuss appropriations for improvements to streets and highways.

Asbury Park, N. J.—The question of constructing a handsome new ocean boulevard from Atlantic Highlands to Cape May is being discussed; Frank Appleby is at the head of the project.

Bayonne, N. J.—An ordinance has passed Council for the improvement of 14th street, from the Boulevard to Avenue E, with "Blome Company Graniteoid Concrete Blocked Pavement" instead of asphalt as heretofore petitioned.—Pierre P. Garven, Mayor; W. C. Hamilton, City Clerk.

Caldwell, N. J.—A resolution has been passed by the Board of Freeholders authorizing the grading and paving with telford of Hill street, between Central avenue and Green Brook avenue, North Caldwell and Caldwell, and of Green Brook avenue between the Caldwell Township line and Pier lane.

Camden, N. J.—Council has passed ordinances for the paving of Liberty street from Tenth street to Mount Ephraim avenue, with sheet asphaltum on a concrete foundation, and Westfield avenue, from Twenty-sixth street to Twenty-seventh street, by paving from curb to curb with bitulithic pavement laid under the patents of Warren Brothers Company of a thickness of two inches after compression laid on a four-inch concrete foundation with two rows of granite block stretchers laid along the outside, and one row of granite block stretchers laid along the inside of each rail of the street railway tracks on said street.—Chas. S. Wolverton, President of City Council; I. V. Bradley, Clerk.

Jersey City, N. J.—The Finance Board has concurred in specifications calling for a wooden block pavement for Bergen avenue from Myrtle to Communipaw avenue; the cost will be about \$53,078.

Newark, N. J.—The Board of Public Works has instructed Engineer M. R. Sherard to advertise for bids for wood block

pavement for South Fourteenth street, between Central avenue and Orange street.

Perth Amboy, N. J.—Resolutions were adopted for grading or establishing grade on the following streets: Penn. from Hall avenue to Eagle avenue; Mary street, from Harrington street north to the end of the street; Kennedy street, from Elizabeth street to Alpine cemetery; Harrington street, from Hanson avenue to Alpine cemetery; Kamm street, from Hanson avenue to Mary street; and Paterson street, from Madison avenue to Brighton avenue.

The ordinance requiring property-owners to pave and curb, or repair, sidewalks, when necessary, was passed on second and third readings; if the owners fail to comply, the city will have the work done and charge it up to the property owners.

Washington, N. J.—Improvements are soon to be made to the roads and highways in this section.

West Hoboken, N. J.—Councilman McCarty has approved plans and specifications for the improvement of Angelique street, between Clinton avenue and Hudson boulevard, and it was decided to advertise for bids; petition has been granted for the improvement of Malone street, between Central avenue and Hudson boulevard.

Binghamton, N. Y.—Clerk Bonnell of the Board of Supervisors has received from State Engineer Skene a letter accompanied by plans and specifications for the building of the Kirkwood river road, which will extend for a distance of 7.79 miles from the State line near Riverside to the intersection of the proposed State line and the present improved State Hospital road. The total estimated cost of improvement is \$99,250, of which the State pays 54 per cent., or \$53,595; the County of Broome pays 35 per cent., or \$34,737.50, and the town of Kirkwood 11 per cent., or \$10,917.50.

Buffalo, N. Y.—The Supervisors' Good Roads Committee recently discussed plans for improvements to roads.

Council has voted to repave West Swan street.

The Park Commissioners are considering the repaving of Richmond avenue with macadam instead of asphalt.

Geneva, N. Y.—The paving of Elm and Colt streets will not be started until spring.

Herkimer, N. Y.—The village will issue bonds to secure funds with which to pave a number of streets.

Mayville, N. Y.—Surveyors from the State Engineer's office have about completed surveys for construction of seventy-five miles of macadam road in Chautauqua County, leading from this town to Jamestown, on the east side of Chautauqua lake.

Middletown, N. Y.—Plans are being discussed for new highway to be constructed through this city.

Norwich, N. Y.—The new South New Berlin State road which ends at the Rexford street bridge and the North Norwich State road which ends at the corporation line and North Broad street, are to be connected by a State road through this section.

Rochester, N. Y.—Council has passed ordinance for constructing asphalt or other pavement with Medina stone curb on Westminster road, to cost \$11,000; brick asphalt or other facing, etc., Meny street, \$3,800; gravel, etc., Geyer street, \$2,000; Medina block, stone, etc., Aqueduct street, \$1,100; trap rock paving, etc., Union street; resurfacing with trap rock, Goodman street, \$5,000, and Oxford street, \$3,500; widening Culver road, \$1,000; repairing gutters, Alexander street, \$1,000; cement walks, Hobart street, \$900, and Orange street, \$700. Council has received the following estimates: Miller street opening, \$100; Culver road widening, \$1,000; Alexander street repairs to pavement, \$1,000; Westminster road pavement, \$11,000; Goodman street resurfacing pavement, \$5,000; Alexander street pavement, \$14,500; Hobart street, cement walks, \$900; Plymouth avenue resurfacing pavement, \$40,000; Engel Place opening and extension, \$1,000; Home Place opening and extension, \$2,000.—E. A. Fisher, City Engineer.

Petitions for asphalt pavement, sewer and conduits on Alexander street from Main street east to Champeney Terrace; for cement walk on west side of Hobart street, from West avenue to Chili avenue, and for cement walk 200 feet south, on both sides of Walter Park, have been referred to the City Engineer to prepare ordinances.—William Ward, City Clerk.

Schenectady, N. Y.—Council has adopted an ordinance for grading, curbing and paving Emmett street.

Waterford, N. Y.—Village Trustees have decided to pave Third street.

Willsboro, N. Y.—Plans are well under way for new highway between Willsboro station to the Reber road.

Grand Forks, N. D.—Council has decided that the sidewalks condemned in district No. 1 some time ago will have to go at once and the Sidewalk Committee was instructed to go ahead and see that the old

plank walks are torn up and cement walks installed; if the property owners fail to do this, the city will take a hand and have the walks torn up and cement walks installed; the plan is to have one complete chain or cement sidewalks throughout the business district of East Grand Forks.

Jamestown, N. D.—An ordinance has been passed requiring the construction of cement walks on several streets.

Akron, O.—Council has passed resolutions for grading, stone curbing and paving with brick on sand base and tar filler, Switzer avenue from South street to Stanton avenue, and Quarry street from High street to Broadway, and stone paving, etc., Quarry street from Main to High street, and paving, etc., Crosby street from Beck avenue to Portage Path and Hyde avenue from Crosby street to Exchange street; also to narrow Russell avenue and to establish grade on Turner street and Fairview and Conger avenues.—W. T. Sawyer, Mayor.

Alliance, O.—An ordinance has been passed by Council for the improvement of East Main street from Mechanic to the east end of the street; this is a repaving job which is to be 48 feet wide and of vitrified block or brick.

Cincinnati, O.—Motions were submitted to Council and referred as follows: Directing the Chief Engineer to prepare and transmit to Council an approximate estimate of the cost of improving McLean avenue, from Western avenue to Harrison avenue, with wood blocks or bitulithic; Linden street, from Carl street to Pulte street, with bowlders; Kerper avenue, from Melbourne avenue to Ridgway street, with macadam—the gutters to be paved with brick; Clifton avenue, from McMillan street to Ludlow avenue, with wood blocks or bitulithic—the grade of this street is to be changed.

Ordinances were passed: To proceed with the improvement of Harrison avenue, from Fischer's west line to the west corporation line; Ludlow avenue, from Clifton avenue to Evans place.

The Board of Public Service submitted a statement showing the cost of improving certain streets, as follows: Opera place, from the east line of Elm street to a point 180 feet west of Vine street, excepting the intersection of Race street, by resurfacing with asphalt, \$2,130.55; Kemper lane, from Yale avenue to the south end of the present asphalt improvement, with asphalt, \$13,067.65; Cutter street, from Sixth street to Wade street, with asphalt, \$40,199.37; Berlin street, from the south line of Hopkins street to the north line of Smith street, with brick, \$11,670.83.

Ordinance introduced by Mr. Schueler was passed providing for a bond issue of \$36,000, the proceeds of which are to be used to defray the cost of repairing twenty-five streets, including Eastern, Spring Grove and East Auburn avenues.

Ordinance has been introduced in Council for the improvement of Storrs street, from Neave street to Burns street, by the paving of the roadway with wooden blocks.

Cleveland, O.—Sixty owners of property abutting on South Woodland road in Orange Township signed a petition asking that the highway be paved with brick, the petition being presented to the County Commissioners; A. B. Lea, County Engineer, was asked by the Commissioners to furnish an estimate as to the probable cost; the stretch of road to be paved is about six miles in length.

Dayton, O.—Plans and estimates submitted to the Servers give the estimate for the paving of Clegg lane, from Lafayette to Second streets, with cement, at \$1,100, brick, \$1,430, and asphalt, \$1,615.

Fosteria, O.—The large sewer on Columbus avenue has been completed, and as soon as possible the laying of the crushed stone for macadamizing this avenue will be started.

Guernsey, O.—The Guernsey County Commissioners have asked the township and city to share the expense of the proposed macadamized road to Northwood.

Hamilton, O.—Council has decided to issue \$25,000 4 per cent. semi-annual 20-year bonds for repaving existing streets; also to proceed with the repaving with sheet asphalt of Third street, from High to Ludlow street, and High street, from the C. & H. & D. Railroad at Fourth street to the High and Main street bridge; also to pave with asphalt brick, bitulithic or bituminous macadam Wood street, from Fifth street to Monument avenue, also to issue \$4,195.86 bonds to pay the cost and expense of improving North E street, from Millville avenue to Elvin avenue, by grading, graveling, curbing and guttering, and paving the sidewalks with cement.—Thad Straub, Mayor.

Ironton, O.—The City Clerk read a report of the estimated cost of grading Fourth street, between Pine and Hepler streets, and Sixth street, between Oak and Mastin avenue, showing the estimated costs of the former to be \$930, of the latter

\$330, or a total of \$1,260; the report was referred to the Street Committee, with instructions to bring in a resolution to appropriate the necessary money and authorize the Board of Public Service to proceed with the work when a profile of the work is prepared by the City Engineer.

Lorain, O.—Council has authorized the Street Committee to improve Milan street, near the West corporation line by macadamizing it with limestone, and \$500 has been voted toward the work.

Martin's Ferry, O.—Council has passed an ordinance for the improvement of Hickory street, from Seventh street to Tent street, by paving the roadway with hard-burned paving brick or block.

Sandusky, O.—The Board of Public Service has granted permission to M. R. Dickey representing the Asphalt Block Paving Company, of Toledo, to lay some of his material at the intersection of Columbus avenue and Washington Row for a test.

Wooster, O.—Bids will be received Oct. 1 for the purchase of \$6,400 and \$7,000 4½ per cent. paving bonds; also \$12,000 4 per cent. 20-year refunding bonds.—J. B. Miner, City Auditor.

Muskogee, Okla.—The Mayor and Council are discussing the most desirable method of paving the streets; \$500,000 will be expended.—Leo Burnett, Mayor.

Altoona, Pa.—Application will soon be made to the State Highways Department by the Board of Road Supervisors of Logan Township for a new strip of road from the northwestern boundary line of Altoona on Washington avenue to the foot of Buckhorn Hill, a distance of 2½ miles.

Bethlehem, Pa.—Plans are under way for securing a new 70-foot boulevard between this city and Allentown; among those interested are G. Miner Dodson, of this place, and Joseph F. Gorman, of Allentown.

Danville, Pa.—A proposition is being considered by the Borough Council to pave East Front street; the kind of material has not been decided upon.

Dunmore, Pa.—The Borough Council has passed an ordinance for the paving of Blakely street.

Milford, Pa.—Contracts will soon be awarded for constructing new roads in Pike County, Lehman Township and Green Township.

Scranton, Pa.—The Board of Public Works has plans under way for paving all streets in the heart of the city, including Ridge row, Webster street, Pine street, Platt place, Bogert place and Dix street.

Shamokin, Pa.—Better roads are desired in this section; among those interested are the people of Montour, Lycoming, Union, Northumberland and Snyder counties.

Shamokin, Pa.—Taxpayers at next election will vote on the question of borough borrowing \$55,000 for street paving purposes.

Warren, R. I.—The taxpayers have appropriated a total of \$2,700 for new highway work and improvements on the town building; the most important item of expenditure was the sum of \$2,000 to the State Board of Public Roads for making a macadam improvement to the full width of Main street, from South Main to Kelley's bridge.

Chattanooga, Tenn.—Contracts are soon to be awarded by S. B. Cook, Chairman of the Park Commissioners, for the construction of a new road proposed through Jackson Park.

Salt Lake City, Utah.—The Council Engineering Committee recommends that the Board of Public Works be instructed to advertise at once for bids for the paving of State street, from Seventh to Ninth South streets; the paving on Main street now runs to Ninth South, and it is expected to pave Eighth and Ninth South streets, between Main and State streets next year.

Alexandria, Va.—A movement having for its object the improvement of the upper end of King street, from the corporate limits on the west to the new union passenger railway station, is assuming more definite shape, and it is regarded as a foregone conclusion that it will be only a comparatively short while before that thoroughfare on the west to the depot is paved. Members of the Board of County Supervisors, together with city and railroad officials, recently held a meeting at Spring Park and it was decided to have the County Surveyor draw plans for the work, provided the Washington-Southern and Washington, Alexandria and Mount Vernon electric Railway companies bear their proportionate share of the expense; the question of widening the bridge at what is known as Hooft's run was deferred; it is proposed to make it 60 feet wide; it is estimated by Engineers that the total cost of the proposed improvements will be something like \$18,000.

Big Stone Gap, Va.—A movement is on foot to improve the roads in Southwest Virginia, particularly throughout Wise County; work is to be commenced as soon

as possible; a \$100,000 bond issue is proposed.

Catalpa, Va.—Bonds, \$30,000, have been sold for the construction of macadam roads in Catalpa Township, Catalpa County.

Culpeper, Va.—Plans are under way for laying about ten miles of macadam in Catalpa, this township; bonds for this purpose have been issued.

Bellingham, Wash.—The City Engineer has estimated the cost of grading and graveling Lake street at \$17,132.

Seattle, Wash.—R. H. Thomson, City Engineer, estimates the cost of street improvements as follows: Concrete walks on East Olive street and Eastlake avenue, \$16,650; filling and roadway of Spokane avenue, \$276,770, and filling Newton street, \$11,000.

Tacoma, Wash.—Plans and specifications have been filed in the office of the Commissioner of Public Works for grading and cement sidewalks in Local Improvement District No. 653, estimate \$4,847; in No. 394, estimate \$4,478; in No. 629, estimate \$11,976; for grading and paving with asphalt No. 409, estimate \$18,457; for grading and paving with sandstone blocks in No. 408, estimate \$71,948; for grading and laying cement sidewalks in No. 600; estimate \$23,366, and for grading and laying wooden sidewalks in No. 628, estimate \$19,782; bids will be received about October 1.—Owen Woods, Commissioner of Public Works.

Walla Walla, Wash.—West Main street for four blocks to the new O. R. & N. depot will be paved before winter sets in, the principal hindrance to the plans being removed when the Gilbert Hunt Company and the Holt Manufacturing Company agreed to take the bonds for the paving of the street intersections; under ordinary circumstances the city pays for the improvement of street intersections, but the city has reached its limit of indebtedness and could not legally take the bonds.

Beloit, Wis.—A petition has been presented to Council asking for the paving of Liberty court.

Merrill, Wis.—The Commercial National Bank of Chicago has purchased \$50,000 Merrill Park and street improvement bonds at a premium of \$1,153.

Milwaukee, Wis.—A new public boulevard, 144 feet in width and perfect in construction, to cost about \$10,000,000, is planned to connect this city and Chicago; the Chicago-Milwaukee Road and Realty Company has been formed for this purpose; the Merchants and Manufacturers' Association is interested.

At a convention for good roads recently it was decided to vote at the next election on bond issue for good roads.

Rhineland, Wis.—Street improvement bonds amounting to \$14,000 have been sold.

SEWERAGE

Hope, Ark.—The Sewer Board is arranging to construct sewers in District No. 1, —E. S. Greening, Secretary.

Little Rock, Ark.—Council will probably take steps at once to order a septic tank constructed by Sewer District No. 51 Twenty-third and High streets.

Livermore, Cal.—The town will begin at once the construction of a sewer system by day labor.

Monrovia, Cal.—Location and surveys are being made by Engineers Olmstead & Gillen, of Wright & Callender Building, Los Angeles, and H. S. Gierlich, City Engineer, for the proposed sewerage system.

San Francisco, Cal.—About \$3,000,000 will be expended by the Board of Public Works for the construction of concrete, brick and iron stone pipe sewers.—Marsden Manson, City Engineer.

Willows, Cal.—The Town Trustees are considering bonding town to install sewer system.

Fair Haven, Conn.—A petition has been received by the Board of Aldermen for construction of trunk sewer in Front and River streets, from Middletown avenue to Poplar street.

Hartford, Conn.—Residents of Pleasant street have asked \$2,000 appropriation for constructing sewer.

Torrington, Conn.—Two bids were presented for the outfall sewer; only one of which was considered, and that estimate was considered altogether too high; it was left to Warden Dayton to take the matter up with Consulting Engineer W. G. Smith, of Waterbury.

Willimantic, Conn.—Citizens have voted in favor of appropriating \$2,000 for the construction of a sewer on Pleasant street and other streets during the present year.

Washington, D. C.—The District Commissioners state that as result of large number of houses being built in suburban districts further trunk sewers are necessary.

Apalachicola, Fla.—Council has ordered an election Oct. 6 for bond issue of \$10,000, \$2,500 for fire apparatus, \$1,500 for road machinery, \$6,000 for building shell roads.—H. W. Morgan, City Engineer.

Atlanta, Ga.—Council is considering ordinance for the construction of a sewer in and along Peachtree street, from trunk sewer near Tenth street to Eighth street.

Rome, Ga.—It is expected that the Board of Public Works will shortly order the extension of both sewer and water mains down Avenue B in the Fourth Ward.

Chicago, Ill.—The Board of Local Improvements is to at once call for bids for constructing trunk sewers in Western avenue and Kedzie avenue, from Seventy-first street to the drainage canal; estimated cost, \$300,000.

Dalton, Ill.—Engineer Rossiter, 84 Washington street, Chicago, is preparing plans for a system of brick and tile sewers from 12 inches to 4 feet in diameter, for the Board of Local Improvements.

Marshall, Ill.—Ordinances are before the Council providing for the construction of sewers in certain streets.

Alexandria, Ind.—The City Engineer has been instructed to prepare an estimate of cost of a sewer in Sheridan avenue.

Boonville, Ind.—It has been decided to revise and change the plans and specifications for the proposed \$60,000 sewer, bids for which were opened on Aug. 3; new bids will be received.

Evansville, Ind.—Property owners of the square bounded by Virginia, Michigan, Governor and Lafayette streets, have asked the Board of Public Works for a local alley sewer; the Board confirmed the resolution for a sewer in the alley between Edgar and Oakley, from Franklin to Michigan.

Greenfield, Ind.—Construction of sewer in South State street is under consideration.

Hammond, Ind.—A sanitary district, comprising the north portion of the counties of Laporte, Porter and Lake, to work in harmony with the Chicago sanitary district, is under consideration; the object is to drain sewage from Michigan City, Gary, Indiana Harbor, East Chicago and Hammond into the Chicago drainage canal by connecting Grand Calumet River with the Chicago drainage canal through proposed channel at Blue Island, Ill.; it is proposed to try and secure legislation in Indiana creating a sanitary district like the Chicago district; C. W. Hotchkiss, of Chicago, Ill., General Manager of the Chicago, Indiana & Southern and the Indiana Harbor Railroads, is one of the principal promoters.

Vincennes, Ind.—The question of constructing general system of storm and sanitary sewerage in Vincennes is still the most important question before the Board of Works and the City Council, and everything possible is being done to get the matter finally to the point where the sewer can be built. Mayor Greene and other officials recently held a conference with A. L. Stewart, an experienced engineer of Rushville, Ind., and the Sewer Committee may make report recommending appropriation for the purpose of securing the services of an experienced engineer to draw up plans and specifications for a general system of sewers.

Carroll, Ia.—Plans have been made for sewer system to include three miles of 8 and 10-inch sewer pipe.—H. Hensen, City Engineer.

Cedar Rapids, Ia.—Construction of a number of 6-inch sanitary sewers in the West Side is proposed.

Wall Lake, Ia.—Village is considering installing sewer system.

Sioux City, Ia.—City Engineer Skeels has prepared plans for the proposed Bacon Creek sewer, to be 2,500 feet long.

Topeka, Kan.—Council has received a protest against the sewer which is now being constructed in sewer district No. 30; it is claimed that the sewer planned is too small to carry storm waters.

Wichita, Kan.—The citizens of the Riverside district will shortly ask Council for permission to construct a sanitary sewer in that part of the city.

Franklin, Ky.—An election will probably soon be held to vote on issuing bonds for the construction of a sewerage system.

Lexington, Ky.—As soon as the city receives the money for the new electric lighting franchise it will go ahead on the proposed storm water sewers on Johnson avenue. City Engineer O'Neill says Johnson avenue has no storm water sewers and that part of the city suffers greatly from overflows, to the great inconvenience of citizens and discomfort of property owners.

Baltimore, Md.—Chief Engineer Calvin W. Hendrick, of the Sewerage Commission, is preparing his estimates for 1909 to include contracts for sludge tanks, filter beds and settling basins at Back River, so that part of the disposal plant will be ready for use when the work begins of making the house connections; at the present time a large part of the work on the outfall sewer—in fact, 80 per cent.—has been completed, and both the eastern and western low-level interceptors are far under way; with the completion of this work and of the main force drain between the low levels and the outfall sewer Mr. Hendrick expects to begin building a great

number of laterals connecting up with these main drains; the lateral work he expects to begin the latter part of next year; the year following, 1910, will be largely devoted to connecting up with these laterals with the individual houses.

Contracts are to be let shortly for the work at the disposal plant to include the construction of four sludge tanks, of which there will ultimately be six; four sprinkling filter beds, of which there are to be ten and two settling basins; these contracts will involve the approximate expenditure of about \$700,000.

The Colonial Park Estates Company is to sell \$100,000 of preferred stock for the purpose of building permanent roadways, sewer systems, water supply, drainage and parkways throughout its tract.

Ellicott City, Md.—The city is to construct concrete sewer in Main street.

Lawrence, Mass.—Wm. S. Johnson, hydraulic engineer of Boston, has been in the city investigating conditions of the sewerage system and reports that the May street sewer is inadequate.

Lawrence, Mass.—It is probable the city will undertake to build relief sewers in Hancock and Margin streets and thus relieve the situation for the benefit of the property owners in Ward 5.

Ludlow, Mass.—Town has voted \$1,000 for the construction of a sewer.

Winchendon, Mass.—The Selectmen have been discussing the sewerage question.

Big Rapids, Mich.—City has voted to extend water mains and to construct new sewers.

East Lansing, Mich.—It is proposed to expend \$5,300 in drains and sewers in this city.—George Martin, City Clerk.

Another election will be held to establish the legality of \$10,000 sewer bonds.

Greenville, Mich.—Council intends to construct a sanitary sewer on Clay street north from Grove street to Flat River.

Ludington, Mich.—The Board of Public Works will recommend construction of several sewers, to cost about \$9,000.

Rockford, Mich.—Plans are being made by McVean & Kellogg, Consulting Engineers, of Grand Rapids, for general sewer system for the village, to cost \$20,000.

Duluth, Minn.—The Board of Public Works has been petitioned for the construction of a sanitary sewer in Vista street from Fay avenue to the intersection of Eighth street.

Mankato, Minn.—The investigating committee has recommended the construction of adequate system of storm sewers.

St. Paul, Minn.—A favorable report on the resolution by which the city is to contribute \$1,500 towards the construction of a \$5,000 private sewer for the American Can Company along Prior avenue, has been made by the Aldermanic Committee on Streets.

Butte, Mont.—Bids were ordered advertised for the construction of a continuation of the storm sewer in Second gulch from the south end of the present section to Galena alley, in order that the McKinley school may make use of the ground there as a playground; resolutions were introduced to construct a sanitary sewer on West Galena from 150 feet east of Western avenue to the outlet, and on Broadway from Excelsior to Henry, on Galena, from Warren to Gaylord, on Broadway from Emmet to Western avenue. There was objection to the sanitary sewer on Aluminum from California to Nevada, and the matter was referred to the committee.

Asbury Park, N. J.—The South Main street sewers will be extended this fall as far west on Corlies avenue as the railroad.

Bayonne, N. J.—An ordinance has passed Council to build a sewer in the westerly sidewalk of the Boulevard, from the center of Fifteenth street, to connect with the present sewer in Thirteenth street.—Pierre P. Garven, Mayor; W. C. Hamilton, City Clerk.

Haddonfield, N. J.—It is probable that the Borough Council will shortly take steps for the construction of a storm sewer on Estaugh avenue.

Millville, N. J.—Plans for Millville's new sewage disposal plant were approved by the State Board of Health; the plant will cost \$30,000, and it will avert danger of having the oyster waters of Morris Cove contaminated.

North Plainfield, N. J.—Mayor Samuel Townsend has called the attention to the questions of sewage disposal, and suggests that a conference be held soon; he also suggested that when the city officials find it convenient to confer they communicate with W. J. Buttfeld, a member of the Borough Commission; the matter was referred to Mr. Mygatt, Chairman of the Special Commission appointed by Mayor C. J. Fisk, of Plainfield.

Perth Amboy, N. J.—A petition for a sewer in Smith street, from Fox Hill road to Stockton street, and in Grace and Sheridan streets, to the Raritan River, one from property owners in Bertrand avenue for a sewer and water pipes between Smith and

Market streets, and petition for a sewer in Pulaski avenue, between State and Parker streets, were referred to the Committee on Streets and Sewers.

A resolution was adopted for a 12-inch sewer in Ridgely street, from Johnstone to Penn street.

East Rochester, N. Y.—At special election the village decided to purchase all sewers belonging to the Despatch Sewage Company for the sum of not to exceed \$35,000; also to construct another portion of the sewer system at an expense not exceeding \$10,000, the whole expense thereof to be assessed upon the village at large.

Gloversville, N. Y.—At recent meeting Council considered plans relative to the sewer system.

Mt. Vernon, N. Y.—Consulting Engineers Hering & Fuller, 170 Broadway, New York City, will prepare revised plans for a sewage disposal plant, and associate with Consulting Engineer John M. Farley, White Plains, who prepared the original plans; bids on construction will soon be called for by Council.

Newburgh, N. Y.—Wm. J. Blake, Jr., City Engineer, is preparing plans for a sewer on Robinson avenue, from Broadway to Ann street, and then west on Ann street to trunk sewer in Lake street; bids will be called for by Council.

Oneida, N. Y.—The Board of Public Works has voted to advertise for bids for the construction of a sewer in Central avenue; plans have been completed.

Oswego, N. Y.—Chas. H. Snyder, City Engineer, is preparing plans for a sewer in Mitchell street, from east line of Ninth street; bids will soon be called for by John Smith, Commissioner.

Poughkeepsie, N. Y.—The Board of Health has adopted a resolution for the construction of sewer on Albany avenue, from Hill street to Dutchess avenue, and on Dutchess avenue, from Albany street to Cataract place.

The Board of Public Works has granted George Hughes permission for the construction of a new 3-inch sewer in North Hamilton street.

Rochester, N. Y.—Council has passed ordinances for constructing Schley place sewer, cost \$1,150; West Cottage street sewer, \$750; Colvin street sewer, \$1,100; Clinton avenue South sewer, \$2,500; Mt. Hope avenue and Elmwood avenue sewer, \$3,000; Litchfield street sewer, \$1,800, and cleaning Tilden and John street sewer, \$500. —William Ward, City Clerk.

Troy, N. Y.—The Board of Contract and Supply Engineer has submitted plans and specifications for two small sewers between Eighth and Ninth avenues, one below Eleventh street and the other between Fourteenth and Fifteenth streets.

Akron, O.—Resolutions have passed Council for constructing sewer in Amherst street, from Thornton street to the Ohio canal, in Portage Path from Grand avenue to the north corporation line, and sanitary sewer in Vesper street, from North Howard street to Norwood avenue. —W. T. Sawyer, Mayor.

Cincinnati, O.—Council has adopted a resolution for the construction of sewers in streets and right-of-way west of Harrison avenue, north and south Montana street to Bridgetown road and Muddy Creek road; also for a 24-inch pipe sewer through rights-of-way east of Harrison avenue south of Montana street.

Motions were submitted to Council and referred directing the Chief Engineer to submit an estimate of the cost of constructing a sewer in Wehrman and Fredonia avenues; a sewerage system in the streets and alleys bounded by Probasco avenue and McMillan street and Clifton avenue and the canal, said plan also to include all the existing sewers as well as those now under contract.

Ordinances were passed to proceed with the construction of a sewer in Renner street, from North Elm street to the angle west of Hamburg street; in Merton street, from Queen City avenue to Montrose street; in Marquis street, from Colerain avenue to Marine street.

The Board of Public Service transmitted a statement showing the total cost of constructing sewers, as follows: Harrison avenue, from Rankin street to Clifford avenue, \$11,090.03; Denham street, from Western avenue to Geiger street, \$6,292.65; Shaw avenue, from existing sewer in Wasson road to Wabash avenue, \$2,847.98; Enright avenue and West Eighth street, \$5,752.65; Irvin street, from Forest avenue to Talbott's subdivision, \$2,107.41; Dhonau street, between Spring Grove and Colerain avenues, \$1,436.50.

Cleveland O.—The Board of Public Service has been authorized to expend in amount not to exceed \$135,000 in the construction of the intercepting sewer in Lakeside avenue northeast, between East Fortieth street and Marquette street Northeast.

Circleville, O.—Election is to be held Oct. 6 to vote on issuing \$100,000 of bonds for constructing sanitary sewer system. —A. L. Redman is President City Council.

Dayton, O.—City Engineer Cellarius has submitted estimates to the Service Board for construction of storm sewers on Heaton, Indiana and Virginia avenues, from Illinois to Connecticut avenues; he estimates the total cost at \$4,850. He estimates the total constructing sewers on Connecticut, Indiana and Grove avenues, from Illinois to Virginia avenue, at \$2,750. The Clerk of the Board was authorized to advertise for bids for these improvements.

Hamilton, O.—Council has passed ordinances to proceed with the construction of sanitary sewers in Millville avenue, from Progress avenue to E street; in Michigan street, from Front street to Central avenue; in North Fourth street, from Campbell avenue to Heaton street; Millville avenue, from Mann street to the C. H. & I. Railroad; also to issue \$20,000 4 per cent. semi-annual, 20-year bonds for constructing storm sewers. —Thad Straub, Mayor.

Ironton, O.—The Sewer Committee has been instructed to bring in the necessary legislation for the construction of a sewer from Walnut street to Chestnut street.

Lorain, O.—Resolution has been adopted for sewer districts Nos. 8 and 9, in West Erie avenue sewer district.

Piqua, O.—A resolution declaring the absolute necessity of sewerage in Shawnee was passed by Council and a special committee was appointed to confer with the Board of Public Service and decide upon some definite form of action; the Service Board is in possession of a letter from the State Board of Health declaring that in a short time a reduction plant will be necessary in Piqua; this board will likely be conferred with before any sewer is built in Shawnee.

William B. Mitchell, Clerk of the Board of Public Service, has received a letter from State Board of Health Officer Probst stating it best not to make the sewer on South street a combination sewer; if such a sewer were constructed the storm water would have to be purified at great expense to the city.

Springfield, O.—The City Engineer has submitted the plans, profiles, specifications and approximate estimate for the construction of a combined sanitary and storm sewer in Warder street, from Lagonda avenue to Greenmount avenue, and a connecting sewer in Warder street, from Lagonda to Greenmount avenue, and in William street, from Warder street to Highland avenue, connecting sewer in Highland avenue, from William street to Greenmount avenue; the total cost of the sewer will be \$9,722.20.

Steubenville, O.—Board of Health has recommended construction of five new sewers.

Youngstown, O.—The County Commissioners have decided upon the construction of a sewer for the county buildings, along the old course of the former sewer rather than down Chestnut street.

Chickasha, Okla.—Council will soon let contract for constructing sewers.

Enid, Okla.—A \$300,000 bond issue for extending sewer and water systems is contemplated.

Lawton, Okla.—It is proposed to construct a sanitary sewer system in the Woods, Beal and Mountain View additions at a cost of \$30,000.

Tulsa, Okla.—The city has voted \$30,000 bonds for extending storm and sanitary sewers.

Woodward, Okla.—No steps have yet been taken to extend the water works, but bonds to the amount of \$40,000 will probably be voted in the near future to construct a sewerage system. —R. C. Price, City Clerk.

Altoona, Pa.—Council at its recent meeting passed an ordinance for the construction of a sewer on Eighteenth avenue, in Ninth street and in Nineteenth avenue.

Chester, Pa.—At special meeting of the Borough Council Surveyor Rambo was directed to prepare plans and specifications for an extension of the sewer on North High street.

Cheswick, Pa.—Cheswick, a borough 14½ miles above Pittsburgh, on the right bank of the Allegheny River, having been refused permission from the State health authorities to empty sewage into the river, will build a sewage disposal plant in connection with the sewer system; a contract for the sewer was let to John F. Emery, of Youngwood, at a price approximating \$2,700; a contract will be let for the disposal plant at a cost of about \$2,500; to cover this outlay a bond issue of \$5,000 has been passed by Council.

Connellsville, Pa.—J. B. Hogg, Borough Engineer, has completed level surveys for sewerage of entire south side of city.

Dunmore, Pa.—The Borough Council has approved resolution for the building of a sewer at Smith and Center streets.

Edwardsville, Pa.—A motion has passed

Council to advertise for bids for the construction of a sewer on Main street.

Jessup, Pa.—The Borough Council has passed an ordinance for the construction of the first district sewer.

Marcus Hook, Pa.—A. F. Damon, of Darby, has prepared plans for the construction of a sewerage system and disposal plant.

Millville, Pa.—The plans for a sewage disposal field, which Millville Council submitted to the State Board of Health, have been approved, and the work will begin in a short time.

Monaca, Pa.—Chairman Batchelor, of Sewer Committee, reported to Council that all sewers contracted for have now been laid and recommended that an ordinance be drafted for sewer along river bank; matter referred to Ordinance Committee; the Sewer Committee was instructed to have plans made for sewer.

Pittston, Pa.—Resolution has been introduced in Council for the construction of a private sewer on Morgan street in the Fourth Ward.

Wormleysburg, Pa.—The newly elected Council will shortly take up the matter of the sewerage conditions in the borough.

York, Pa.—An ordinance presented in Council by Mr. Neuman, providing for the construction of a storm water sewer on West Mason avenue, from Penn street to the Codorus Creek, was returned to Council with an affirmative recommendation.

The permit for the construction of a sewer on Rouse avenue and Norway street was granted to the York Knitting mill, on motion of Mr. Stauffer.

Narragansett Pier, R. I.—The proposed sewerage system will cost \$15,000 to \$30,000. —W. Herbert Caswell, Town Clerk; Thos. G. Hazard, Jr., Engineer.

Dell Rapids, S. D.—The construction of sewer in east part of town is proposed.

Mitchell, S. D.—The city is considering constructing sewers.

Sioux Falls, S. D.—A movement has been started by the School Board to secure the construction of a sewer in the Lincoln school district.

Sioux Falls, S. D.—A movement is under way looking to the construction of a sewerage system on the West Side, lying north of Tenth street and west of Prairie avenue.

Knoxville, Tenn.—The Board of Public Works will receive bids at once for 800 feet of laterals running from Fourth avenue to Broadway on Lennard place and Overton street; they will be connected with the First Creek sewer, which is now being extended.

Murfreesboro, Tenn.—Council has selected Granberry Jackson, of Nashville, to make survey and estimate the cost of constructing a sewerage system.

Arlington, Tex.—Council will shortly call a meeting for the purpose of discussing the sewerage question.

Denton, Tex.—An election will be held Oct. 10 to vote on issuing bonds for the construction of a sewerage system. —W. L. Foreman, City Secretary.

Fort Worth, Tex.—Council has called an election for the purpose of voting on issuing bonds for installing a sewer system; Mayor Grant may be addressed.

Richmond, Va.—The installing of sewers throughout the borough of Miner's Hills is being considered; it is the intention to construct the main along Mock street to Mill street, thence to the dividing line between Parsons and Miner's Hills.

At recent meeting of the Town Council of Highland Park the matter of enlarging the sewerage system was discussed.

Moundsville, W. Va.—Plans have been completed and forwarded to Mayor Williamson for the proposed sewerage system.

Seattle, Wash.—R. H. Thomson, City Engineer, estimates the cost of constructing sewers as follows: Bagley avenue, \$23,200; West Forty-sixth street, \$1,020, and West Forty-eighth street, \$5,350.

Corliss, Wis.—A survey has been made for a sewer system. —A. G. Cady, Village Clerk.

Neenah, Wis.—The city contemplates constructing about 198 feet of 20-inch tile sewer. —J. P. Keating, City Clerk.

Oconomowoc, Wis.—Council has passed resolution that a sewerage system be established in the city.

Racine, Wis.—A Committee reported to Council in favor of a sewer being built in Racine street at the estimated cost not exceeding \$2,667.18, the work to be done as soon as funds are available. D. G. Jones & Co. submitted a proposition to the city that they would furnish funds for the Racine street sewer and wait until the city could legally reimburse them. Referred to the Street Committee, Finance Committee and City Attorney; the probabilities are that the proposition will be accepted.

Welland, Ont., Can.—Work will be commenced this fall on the construction of a trunk sewer to cost about \$400,000, and on several branch sewers, to cost about \$19,000.

WATER SUPPLY

Long Beach, Cal.—Voters have signed a petition asking Council to take steps to secure a municipal water plant for the city.

Santa Barbara, Cal.—The Surveyor is laying out routes throughout the outlying east and west sides for extension of water mains.

Dover, Del.—Council has voted to extend its water mains through the northwestern section of the city.

Augusta, Ga.—Council has received a letter from Chairman Charles Estes, of the Citizens' Advisory Committee, urging the imperative necessity of purchasing and installing an auxiliary steam pump at the pumping station of 10,000,000 gallons' capacity in twenty-four hours. On motion of A. J. Twiggs, of the First Ward, the matter was referred to the Mayor and Water Works Committee, to report to Council.

Covington, Ga.—The citizens have voted bonds for the construction of water works and a sewerage system.

Douglas, Ga.—An election will be held October 3 to vote on the question of issuing \$35,000 school, water and light improvement bonds.

Pensacola, Fla.—The purchase of two new boilers for the water works plant is urgently recommended to Council by the Committee on Water and Gas.—Address Chairman Brown.

East Moline, Ill.—City Engineer Paddock has been directed to prepare plans for reservoir to hold 67,000 gallons of water.

Mattoon, Ill.—Ordinance is pending in Council providing for laying water mains connected with the Mattoon Water Works and Reservoir Company's plant along the alley between Charleston and Wabash avenues, from Fourteenth to Tenth streets.

Columbus, Ind.—Council is discussing means of securing a better water supply.—Address John W. Suverkrup.

A committee has been appointed by Mayor James Cochran to inspect the water works plant at Gallipolis, O.; this city has been without a water supply other than the unfiltrated river water for the last two years.

Crawfordsville, Ind.—Steps will shortly be taken by the city Board of Health to have the city's water supply improved.

Indianapolis, Ind.—The Indianapolis Water Company proposes to install a booster station for its lines to Irvington, a suburb, which is 120 feet above its filter bed level.

Council Bluffs, Ia.—An election will be held October 27 to vote on issue of \$600,000 bonds for the construction of a water works system; in the meantime plans and estimates from hydraulic engineers and other preliminary work will be done.—Address Mayor Maloney or Alderman Jansen, Chairman of the Water Committee.

Des Moines, Ia.—Council has ordered the Des Moines Water Company to lay water mains on Gillett street, from Sixteenth to Eighteenth streets.

Lake Park, Ia.—Council has directed plans to be prepared for constructing water system, estimated to cost \$50,000.

Kansas City, Kan.—The matter of condemning the old water works plant and of building a new plant is being considered by the city.—Address Mayor Cornell.

McPherson, Kan.—Council is preparing to purchase the water and light plant owned by private company or build an entirely new plant.

Moundridge, Kan.—Bonds have been voted for the construction of an election light and water plant.

Tonganoxie, Kan.—The matter of a municipal water plant for this town is being agitated; a plant could be installed at a cost of \$20,000; Whitsett Leming, of the State Bank of this town, is interested.

Barboursville, Ky.—The Barboursville Water Works Company will install a water works system; plans have been completed.

Newport, Ky.—An election will be held November 6 to vote on the question of issuing \$100,000 bonds for the improvement of water system.

Topsham, Me.—The town has taken steps to secure a public water system.

Grand Rapids, Mich.—Council refused to adopt recommendations of General Manager Samuel A. Freshney, of the Board of Public Works, that contract be entered into with the Wilson-Snyder Manufacturing Company for 12,000,000-gallon pumping engine for \$65,000, and it was decided to readvertise, the bid having been higher than that of the Platt Iron Works.—Joseph Renihan, Chairman, Committee of Ways and Means of Council.

Wyandotte, Mich.—Estimates are being prepared for filtration plant.—Address Mayor McGlaughlin.

Mankato, Minn.—In report of Sanitary Engineer recently submitted to Mayor Andrews several repairs and improvements to the water system are recommended.

Bound Brook, N. J.—The Bound Brook Water Company is considering improving the plant; the improvements contemplated will increase the supply and pressure.

Collingswood, N. J.—The Fire and Water Committee of Council has been instructed to obtain estimates of cost for municipal water works.

Jamesburg, N. J.—The Jamesburg Water Company has petitioned for a 50-year franchise to use the streets of the town.

Lodi, N. J.—At recent public meeting held to discuss the matter of a municipal water plant, the construction of an entirely new plant instead of purchasing that of the Lodi Water Company, was favored.

Rockaway, N. J.—Mayor and Council are taking up the question of an additional water supply for the town.

Allegany, N. Y.—At recent special election vote was carried for the installation of a water works plant and system.

Catskill, N. Y.—The Water Commission has presented its report to Council on the question of a water supply for Catskill, and recommends the construction of a gravity system of water works, using Potuck Creek as the source of supply, subject to verification of the plans and estimate of cost by an engineer; it also recommends that an advisory committee of three be appointed by the taxpayers to act with the Board of Water Commissioners in the matter, and that the question of issuing bonds for the construction be submitted to a vote; probable cost, \$150,000.—James P. Philip, Chairman.

East Rochester, N. Y.—The village has voted to acquire the water works system belonging to the Despatch Water Company for the sum not to exceed \$105,000, and the Board of Trustees of the village has been authorized to borrow on the bonds of the village a sum not to exceed \$105,000, for the purchase of the water works system.

Hudson, N. Y.—The Board of Water Commissioners, including J. P. Phillips, J. W. Kittrell, Geo. W. Holdridge and Edgar Johnston, Secretary, have reported that it is advisable to change the source of water supply from Hudson River, the present source, to Potuck Creek, and construct a new gravity water works system, with a daily capacity of 2,000,000 gallons. Work will call for construction of large concrete dam and about 5 1/4 miles of 15-inch high pressure water main; estimate, \$142,000.

Newburgh, N. Y.—City Engineer Blake is completing plans for increasing the storage capacity of Washington Lake, by raising the dam between the lake proper and the receptacle at its north end known as Lockwood basin.

North Tonawanda, N. Y.—Council is considering the matter of opening up Bryant street and running a water main down the street to the plant of the American District Steam Company.

Oneida, N. Y.—Engineer Fisher, of Rochester, is preparing a report on increasing the water supply of Oneida and will probably recommend that larger mains be laid.—Geo. S. Tibbetts, City Engineer.

Rochester, N. Y.—Charles F. Pond, Comptroller, has been asked to provide additional money to pay estimates for work on Cobb's Hill reservoir and for the extension of water mains and other improvements and additions to the water works system, together with payments for land to be acquired for the protection of the waters of Hemlock and Canadice Lakes; and has obtained authority from Common Council to procure an additional \$100,000.

The Commissioner of Public Works has been authorized to extend a water main in Thurston road, from West Magnolia street to a point about 100 feet north of Hovey street, for the purpose of furnishing water to residents of the city fronting on the east side of Thurston road.—E. A. Fisher, City Engineer.

Sherman, N. Y.—It is proposed to call an election to vote on the building of a system of water works, the cost not to exceed \$20,000.

Wilmington, N. C.—The Board of Aldermen will offer for sale \$200,000 bonds, the proceeds of the bonds will be used either to purchase and enlarge the present water works plant or to construct an entirely new system.

Dickinson, N. D.—Council has voted to complete the water works system at a cost of about \$12,665.

Minot, N. D.—A second election will be held to establish the legality of the water works bonds.

Cincinnati, O.—The Board of Water Works Commissioners has instructed Superintendent Welling to lay a water main in St. Louis street, east from Eastern avenue to Williams street, and to lay a main in Lehman street, from Lee to Main street; also to connect the dead end in Bush street to Garrard avenue; a communication from the Hignite Coal Company, asking for a water main on Twentieth street, west from Madison avenue, was referred to Superintendent Welling with power to act.

Cleveland, O.—The Board of Public Works recommends the universal use of water meters.—A. J. Callow, Clerk of the Board of Public Service.

Columbus, O.—S. S. Wyer, Consulting Engineer, Harrison Building, states that he has been appointed by the National Fire Equipment Company to prepare plans and specifications for a complete water works and electrical lighting system for a Columbus suburban town, gas engines, power fire pumps, power deep well pumps, electric generators, switchboards, arc lamps, water mains, valves and fire hydrants, elevated tank and fire hose required; excavating for water mains, laying pipe, stringing wires and installing lamps and erection of pump house will also be let by contract.

Cleveland, O.—Ordinance No. 12,395 has passed Council to authorize an expenditure of \$90,000 for pipe and special castings; also Ordinance No. 12,396, to authorize an expenditure of \$5,000 for pig lead for the Water Department of the Board of Public Service.—Peter Witt, City Clerk; A. R. Callow, Secretary Board of Public Service.

Covington, O.—West Covington Council will shortly take up the matter of installing a water system.

Dayton, O.—Not a single bid was received to construct an extension to and make repairs to the Steele dam. Information was given out by contractors that the appropriation was not high enough to cover the cost of the work. This amounted to \$10,500. Engineer Cellarius placed his estimate at \$10,000, and he says this was liberal. The bids will be advertised again at once. A resolution has been introduced in Council which will direct the City Engineer to prepare plans, specifications and estimates for the construction of a Steele concrete dam, just south of the Washington street bridge; it is hoped to get the necessary legislation through so the active construction of the dam may begin in the Spring; one feature of this new dam, if built, will be the sluice gates so they can be opened and closed during high waters.

Hamilton, O.—Ordinance has been adopted for issuing bonds for extending and enlarging the water works.

Ironton, O.—Mr. Corns brought up in Council the matter of furnishing pure water to the village of Russell, Ky.; he stated that Mr. Foster had stated that the village would furnish all the piping necessary and do the work if this city will furnish the water; the matter is now in the hands of the Fire and Water Committee, which will act on the matter.

Lorain, O.—Pursuant to the request of the Board of Public Service, Council has adopted a resolution authorizing the Board to advertise for bids for 167 tons of 6-inch pipe to be used in constructing a water main on East Erie avenue.

Piqua, O.—A discussion took place in Council as to whether to extend the intake pipe in the hydraulic farther into Frantz's pond, and was decided to leave it to the special committee and the Service Board.

Pleasant Hill, O.—Engineer A. C. Reed, of Pleasant Hill, states that bids will be received Sept. 28 for the purchase of bonds for water works; bids for construction will probably be received some time in November.—C. Roy Coppock, Corporation Clerk.

St. Henry, O.—Council has decided to call an election to vote on the question of constructing water works; engineer not yet selected.—William H. Romer, City Clerk.

Sharon, O.—The municipality has a plan on foot to furnish water works systems for Petroleum, Masury and Hubbard, giving service by use of gravity system.

Worthington, O.—The citizens have voted to grant Bond S. Neff, of Powell, a franchise for water works.

Altoona, Pa.—The Water Committee of Council will shortly advertise for bids for construction of a new storage reservoir.

Biglerville, Pa.—The Biglerville Water Company has been incorporated with a capital of \$5,000 by W. C. Sheeley and C. E. Deatrick, Gettysburg; H. G. Deatrick, F. W. Deatrick and E. H. Sachs, Hunters-town.

Ellwood City, Pa.—The Ellwood Water Company has been granted an extension of one year's time in which to construct their filtration plant. It was decided, however, that the local water company should line the reservoir with cement or paving material set in cement; must fence in the reservoir; must establish a catch drain for possible sources of contamination from the cemetery; must remove all bodies on the slope affecting the reservoir and must arrange that no further burials be permitted in that section affecting the reservoir.

Pittsburg, Pa.—The Common branch of Council has passed the ordinance appropriating \$100,000 to be added to the \$650,000 already available for building the filter beds. The Finance Committee voted to recommend to Council that the citizens be asked to vote at the election November 3 on the following bond issue: Construction of water mains and water lines in section east of Highland Reservoir, \$300,000; purchase of the Monongahela Water Company's

plant, Southside, \$1,975,000; reconstruction and improvement of the Monongahela system, \$700,000; new reservoir for Northside, with site, \$1,200,000; new machinery and appurtenances at filtration plant for Northside, \$500,000; bridge spanning Allegheny River, at the Point to replace old Union bridge, \$1,000,000; new bridge on Larimer avenue, \$175,000; bridge on Meadow street, \$65,000; viaduct bridge from Ohio and East streets, Northside, to foot of Eleventh street, \$1,000,000; new market house for old Haymarket square, opposite former Allegheny Municipal Building, \$500,000.

Wilkes-Barre, Pa.—Residents of the Rolling Mill Hill section are agitating the question of a better water supply.

Colton, S. D.—Bids for the purchase of bonds for the proposed water works will be received on Sept. 29; engineer not yet selected.—L. Clarke, City Clerk.

Columbia, Tenn.—Attorney W. S. Fleming, representing the Columbia Water & Light Company, has submitted a proposition to the Board of Aldermen to sell the entire property, consisting of water, light and gas plants, to the city at a price to be hereafter appraised.

Mt. Pleasant, Tenn.—The matter of increased facilities in the Water Department is being discussed; larger supply of water is needed.

Bastrop, Tex.—An election will be held to vote on the question of issuing bonds for the construction of light and water plant.—Frank Orgain, City Secretary.

Crystal City, Tex.—The Crystal City Water Works Company has been chartered with a capital stock of \$25,000 by J. M. McGinnis, Carl F. Gross and others.

Quanah, Tex.—Council has decided to have plans and specifications prepared for water works.

Rio Grande City, Tex.—J. Tyson will establish a pumping plant to furnish the city with good water.

Ogden, Utah.—The citizens have voted to purchase the plant of the Ogden Water Works Company; the city will on Jan. 1 take over the plant and expend about \$50,000 in improving same.—A. F. Parker, City Engineer.

Salina, Utah.—Council is arranging to secure water supply from a spring eleven miles distant from the city.

Christiansburg, Va.—The city has voted the issuance of \$25,000 water works bonds.

Cashmere, Wash.—Plans and specifications for the local water works have been completed by C. C. Ward, the Engineer in charge of the works; they call for the installation of a pumping plant on the Wenatchee River, near the city, with distributing mains and a large reservoir. Bonds to the amount of \$7,500 were issued for the purpose of establishing the plant, and now that the issue has been approved by the Attorney General the State will take them over and bids for the work will be solicited.

Wenatchee, Wash.—The State has purchased bonds in the amount of \$55,000, the proceeds of which will be used for the improvement and extension of the water system in this city.

Parsons, W. Va.—Petitions are being circulated asking that an election be held to vote on matter of bonding the town for \$60,000 for water works and sewerage purposes.

Wellsburg, W. Va.—M. W. Harris & Co. have purchased \$36,500 5 per cent. Wellsburg water works bonds at a premium of \$452.

Madison, Wis.—Resolutions of Alderman Stadelman were adopted instructing Mayor Schubert and Alderman Sullivan, the Council representatives on the Water Board, to request the Board to lay water mains on certain streets in the Seventh Ward.

Cheyenne, Wyo.—The business men of Cheyenne recently held an interesting conference relative to the city's present water system and its proposed enlargement and improvement. Senator Warren, Senator Carey, Mayor Cook and other leading citizens participated; it was the sense of the meeting that a mass meeting of citizens should be held at once, and the proposition of bonding the city for \$500,000 will be submitted to the voters at the November election.

Douglas, Wyo.—Council is considering the question of municipal water works.

LIGHTING & ELECTRICITY

Gadsden, Ala.—Council has granted the Etowah Light & Power Company, of Atlanta, a franchise to enter the city.

Montgomery, Ala.—The Montgomery Light & Water Power Company has decided to construct an entirely new transmission line from Tallahassee, Ala., to Montgomery, a distance of 30 miles; probable cost, \$100,000.

Hamilton, Ga.—An election will be held October 8 to vote on the question of issuing \$2,500 of city bonds to erect and install a gas lighting plant.—C. I. Hudson, Mayor; P. W. Harrison, Clerk.

Chandlerville, Ill.—The Village Board has advertised for bids for equipment for an electric light plant, which will include either a 50-h.p. gas producer engine with 75-h.p. producer, or a 50-h.p. steam engine and dynamo.

Havana, Ill.—Council is considering the matter of municipal ownership of the electric plant; the present franchise held by Havana Electric Company has not expired.

Goshen, Ind.—A project to rebuild the city's commercial lighting plant at an estimated cost of from \$25,000 to \$50,000, will come up in the Council shortly.

Marion, Ind.—W. E. Hutchinson and Robert Adams of Indianapolis, representing the Indiana Gas and Electric Company, have petitioned the Board of Works for a franchise for the right to equip a plant for the manufacture and production of artificial gas for Marion use; the proposition is under advisement by the Board, and city officials are favorably inclined towards it.

Shelbyville, Ind.—The County Council is considering the advisability of placing an electric plant in basement of jail for furnishing light to the county building.—Address County Auditor.

Danbury, Ia.—Plans are under way for a new village lighting plant.

McPherson, Kan.—McPherson is to have a municipal water and lighting plant; the city will either buy the present concern or will build an entirely new plant.

Baltimore, Md.—The city authorities are investigating the Tower light system, which is now used in other cities.—Robert J. McCuen, Superintendent of Public Lighting.

Ypsilanti, Mich.—Council has granted a 30-year franchise to the Washtenaw Light & Power Company, and it is said that about \$60,000 will be expended for a power and light plant and for improvement of the Huron River; construction work will be begun this fall or early in the spring.

Clarksdale, Miss.—The city will make extensive improvements in its lighting plant.—Address the Mayor.

Gresham, Neb.—J. Lamphere will establish an electric light and power plant.

McCook, Neb.—Council has passed an ordinance granting a 20-year franchise to the McCook Electric Light Company.

Pender, Neb.—It is proposed to construct an electric light plant; bids for bonds will be received about Oct. 1.—R. P. Mason, Village Clerk.

Buffalo, N. Y.—The Cataract Power & Conduit Company, of Buffalo, has petitioned the Public Service Commission at Albany for authority to issue \$120,000 bonds, to be used for the acquisition of property and for the construction, extension and improvement of its plant.

Perry, N. Y.—S. Percy Hooker, W. H. Foster and J. S. L. Purdy, of Le Roy, have petitioned the Board of Village Trustees for a franchise to furnish natural gas for domestic, manufacturing and street lighting; they represent a company which is operating in the Pavilion field; the distance from Perry to Pavilion is about 14 miles.

Grand Forks, N. D.—It is proposed to put the electric light wires underground.

Cuyahoga Falls, O.—Electric light improvement bonds to the amount of \$9,000 are being sold.

Hamilton, O.—Council has adopted a resolution instructing the City Clerk to investigate and correspond with a gas expert and electrical engineer for the purpose of obtaining information in regard to the feasibility of reconstructing the municipal gas plant.

Jefferson, O.—An electric light franchise has been granted by the Village Council to Charles Phelps; the contract with the Jefferson Light & Power Company, in which the Packards, of Warren, were the chief stockholders, expired several months ago; Phelps expects to take over the plant and make many needed repairs.

Lima, O.—The Board of Public Service has selected J. Walter Esterline, of Lafayette, Ind., to prepare plans and specifications for the proposed municipal electric light plant; probable cost, \$70,000.

New Concord, O.—Council is considering the question of constructing an electric light plant.

Niles, O.—Council has passed an ordinance granting the Mahoning Gas Fuel Company a franchise to furnish natural gas to the city; every Councilman voted for the franchise; the 14-inch main which taps the 18-inch main in Stark County, will extend to North Jackson, where the independent mains to Girard, Niles and Warren will branch off in various directions.

Youngstown, O.—The Hydro-Electric Company has accepted the light and power franchise recently granted it by Council, having filed its \$18,000 bond with the City Auditor.

Johnstown, Pa.—The Franklin Extended Electric Company, now seeking a franchise from Council, has optioned six lots in the Sunnyside district; the new company has agreed to furnish domestic current at 7

cents a thousand watts, arc lights at an annual rental of \$40 and has offered to pay the city \$5,000 if the franchise is granted.

Monaca, Pa.—The Borough Secretary has been instructed to advertise for bids for new signal wire from pump station to the reservoir.

Abbeville, S. C.—The electric light plant will be remodeled and enlarged on an extensive scale.—S. M. Orr, City Electrician.

Aberdeen, S. D.—R. F. Wherland has petitioned Council for an electric light franchise.

Mitchell, S. D.—Within a short time work will be commenced on the new electric light and gas plant of the Mitchell Power Company, which will be located about ½ mile from present plant of company; entire new machinery will be purchased for the electric light plant, and a coal gas plant will be installed to take the place of the acetylene plant installed some years ago.

Leamington, Ont., Can.—The electric lighting plant in this town, owned by Messrs. Stors, Reid & Post, has been sold to Detroit capitalists for \$25,000; the new owners intend to make extensive improvements in the plant.

FIRE EQUIPMENT

Montgomery, Ala.—Bids are soon to be advertised for new fire hose.—Address Alderman Sullivan.

Wylam, Ala.—The city is endeavoring to raise funds for a new hose wagon.—Address Mayor Logan.

Alameda, Cal.—The city has secured property on Santa Clara avenue for temporary fire house, preparatory to erecting brick building on site of the old Webb street fire house.

Fruitvale, Cal.—An up-to-date fire house is to be erected on Fifty-seventh avenue and Fourteenth street, Melrose, to be modernly equipped in every detail.—L. Casrera, C. J. Silva and others are interested.

Humboldt, Cal.—Plans have been prepared for new building for the Myrtle Avenue Hose Company.

Melrose, Cal.—The Village Board has decided to purchase fire apparatus.—P. M. Horst, Clerk of the Board.

Oakland, Cal.—A resolution has been introduced in Council by Councilman G. E. Aitken, the intent of which is to provide that the \$10,000 included in the Auditor's estimate of expenses for the new fiscal year for an engine house on Alice street, between Eighth and Ninth streets, and the reconstruction of the one on East Fourteenth street, be not used for such purposes, but instead that the amount be used in providing for engine houses and better fire protection in the outlying districts.

Bristol, Conn.—At the next annual meeting a proposition will come before the Assembly asking for a chemical fire engine and new hose.

New Haven, Conn.—The Fire Commissioners have asked for an appropriation of \$4,000 for a new gasoline engine; new fire hydrants are also needed.

New London, Conn.—At a regular town meeting Alderman Scott brought up the matter of remodeling and improving the building of the Ockford Hose Company.

Atlanta, Ga.—Residents are endeavoring to secure four new fire engines at once.—W. B. Cummings, Chief.

Augusta, Ga.—The city will purchase two small fire engines for a new company in North Augusta; Captain M. J. Murphy can be addressed.

Savannah, Ga.—J. R. Eason & Son, city, will erect a new fire engine house of brick, two stories high, 40x90 feet; cost, \$13,800.

Chicago, Ill.—Fire Marshal Horan can give further information regarding better fire protection planned for the Grand Crossing district.

Monmouth, Ill.—Council will improve the fire alarm system.

New Castle, Ind.—Council will purchase combination hose and chemical wagon and fire steamer for the Fire Department.

Roberts, Ill.—The citizens are organizing a fire company.—Address Village Clerk.

Rock Falls, Ill.—Council will erect a central fire station.

Rockford, Ill.—Council is considering the matter of improving fire protection of the city.

Dubuque, Ia.—Residents of the Hill section are again agitating a demand for a new fire engine for that district.

Lexington, Ky.—Ordinance has passed authorizing the Mayor to contract for 500 feet of fire hose.

Ocean Springs, La.—A new building is being discussed for the volunteer Hook and Ladder Company No. 1.

Bolton, Mass.—A fire company has been organized.—W. H. Dow, Secretary.

Haverhill, Mass.—Agitation is increasing for a relocation of the fire station from Central street to site in the Bradford district; Chief Engineer Gerdon can be addressed.

New Bedford, Mass.—A site in the north

end has been secured for new engine house to be erected at once.

Grand Rapids, Mich.—The Police and Fire Commissioners have petitioned for an appropriation of \$20,000 to build engine house.

Pontiac, Mich.—The city is desirous of securing a combination chemical and hose wagon; Chief Toynton may be addressed.

Red Wing, Minn.—Council will purchase new fire steamer.

St. Paul, Minn.—Architects Beuchner & Orth, Room 601 Manhattan Building, have prepared plans for engine house to be erected at Snelling and Ashland avenues.—Wm. O'Gorman, Secretary of the Board of Public Works.

Reno, Nev.—City Clerk H. E. Christie can be addressed for further information regarding supplies for the Fire Department.

Jersey City, N. J.—The Seventh Ward Improvement Association will try and have the Fire Commissioners place an automobile combination chemical engine and truck in the proposed new fire house which they have been trying for some time to have erected at Bergen and Van Nostrand avenues, and the matter will be placed before the Fire Commissioners at once.

Orange, N. J.—Plans have been completed for new engine house in East Orange for Engine Company No. 2 on property purchased near the Grove street depot for the purpose.—Address Fire Chief Markwith.

Glens Falls, N. Y.—Funds are soon to be raised for a new village hall for South Glens Falls.—Address the Town Clerk.

Oneida, N. Y.—Fire Commissioner F. E. Westfall can be addressed for information regarding sites now being investigated for new fire station.

Oneida, N. Y.—The question of a new building for the Fire Department is being discussed; E. T. Shepard, President of the Chamber of Commerce, is interested.

Syracuse, N. Y.—Three contracts were ordered advertised for bids by the Board of Contract and Supply; they call for sealed proposals for providing 2,500 feet of new hose to the Bureau of Fire, heating the City Hall and building a concrete walk at the house of Engine Company No. 6.

Winston-Salem, N. C.—The city has adopted plans by J. S. Zimmerman, Municipal Building, city, for a new combination fire house and market building.

Alliance, O.—A new sub-fire station is planned by the Board of Public Safety to be located at South Liberty avenue and Garwood street.

Chillicothe, O.—Sites are being investigated for new building to take the place of the present building of the Engine Company No. 1.—Address Fire Board.

The Board of Public Safety recently selected a site for new building for Engine Company No. 1.

Cleveland, O.—Council has authorized the purchase of property at the corner of West One Hundred and Sixth street and Detroit streets as a site for a new fire station.

Lorain, O.—Bonds, \$17,000, are proposed for new fire house and new equipment.

Piqua, O.—The new fire house will be located at the corner of Virginia and Parke avenue, and will be strictly up to date in every particular; \$4,000 will be expended.

Bridgeport, Pa.—The Bridgeport Fire Company No. 2 has recently organized and necessary equipment is to be secured as soon as possible.

Camp Hill, Pa.—The borough wants to erect a three-story brick building on Market street, the main street of the town, that can be used primarily for housing the Camp Hill Volunteer Fire Company No. 1, and incidentally to contain rooms enough for lodge purposes, a postoffice and a town hall, and to arouse interest in the movement a mass meeting of Camp Hill citizens was held recently in the Church of God. Rev. Dr. Silas C. Swallow was chairman of the meeting, and those who spoke included Major Joseph C. Smith, John M. Major, Squire H. N. Bowman, R. L. Myers and Luman Page.

Juniata, Pa.—Site has been secured for new fire house to be erected for the Juniata Fire Company No. 2 as soon as possible.

Wilkes-Barre, Pa.—Councilman Challis presented a resolution authorizing the Joint Fire Committee to advertise for bids on 100 feet of hose; it passed in Select Branch.—James C. Schuler, Fire Chief.

Knoxville, Tenn.—The Board of Public Works will remodel Central Fire Station.—Address Clerk of the Board.

Norfolk, Va.—Residents of the La Fayette Residence Park recently organized for securing better fire protection for that section; Messrs. Flynn, Plummer and Kellam are committee to secure new fire apparatus.

Bellingham, Wash.—Fire Chief Land desires new fire hall and new engine, and other equipment this year.

Nekoosa, Wis.—A fire company has been organized.—O. Berg, Secretary.

Wausau, Wis.—Council has been petitioned to purchase additional fire apparatus.

ELECTRIC RAILWAYS

Huntsville, Ala.—The Huntsville, Chattanooga & Birmingham Interurban Railway, Light & Power Company has been incorporated to construct a street railway from Huntsville to the fair grounds via South Huntsville. Branches will also be built to Chattanooga and Birmingham; capital, \$50,000.—Mr. J. V. Lowry, President; N. O. Wallace, Fayetteville, Secretary; Chas. H. Pulley, Huntsville, Treasurer.

Fayetteville, Ark.—J. R. Ahlefeld, of Leroy, Kan., is interested in a project to construct a street railway in Fayetteville, with branches to Huntsville and Siloam Springs.

Siloam Springs, Ark.—J. R. Ahlefeld, of Topeka, Kan., and J. C. Mitchell, of Fayetteville, are conferring with leading business men in regard to the construction of an interurban line from Fayetteville to Siloam Springs.

Fresno, Cal.—Necessary capital has been secured for the construction of the interurban road to Hanford, which has been promoted by F. S. Granger, of Hanford. Company is to be incorporated with a capital stock of \$1,000,000 to operate the road; among those interested are O. F. Woodward, L. A. Nares of Laton, A. J. Wishon, W. Kerchoff and A. C. Balch of Los Angeles, F. S. Granger of Hanford and William Clark.

Oroville, Cal.—The Board of Trustees of Oroville read for the first time an ordinance granting a franchise to the Northern Electric to cross Third avenue, to run a spur track to the rock crusher of the Valley Contracting Company; the franchise will lapse if the spur be not used for six months.

Redding, Cal.—The Northern Electric Railway Company through its attorney, General W. D. Tillotson, has asked the City Trustees to renew the franchise giving it the right of way down California street; the present franchise is about to expire; the City Trustees will give the Northern Electric a new franchise as soon as the necessary advertising is done.

San Diego, Cal.—Application will be made shortly by the South San Diego Investment Company to the Board of Supervisors for a street railway franchise to connect the other lines now under construction at the head of the bay with Oneonta.

Riverside, Cal.—Riverside & Arlington Railway will build extension to Crestmore townsite.

San Francisco, Cal.—The United Railroads of San Francisco is considering laying new rails on Market street, between Second and Twelfth streets.

Colorado Springs, Col.—The Grand Junction, Palisade & Plateau Valley Railway Company have surveys about completed and franchises and rights of way have been secured for the proposed standard-gauge electric railway, which is to connect Grand Junction and Palisade, a distance of 17 miles; it is planned to begin construction work about Oct. 15; the overhead trolley system will be adopted; the power station will be located at Grand Junction.—E. A. Sanderton, General Manager.

Torrington, Conn.—The Litchfield & Torrington Tramway Company will begin construction work on its proposed electric railway, which is to connect Torrington and Litchfield, a distance of 6 miles, soon; the surveys have been rearranged and rights of way have been secured; John E. Sewell, of Waterbury, is in charge of the preliminary work.

Fairburn, Ga.—D. F. Jones is interested in organizing a company to build an electric road from Fairburn to College Park.

Sparks, Ga.—The Sparks Western Railway Company has applied for a charter to build a line 25 miles in length from Sparks to Moultrie; capital, \$100,000; John R. Barfield, R. L. Wilson, W. J. Rogers, H. C. McDaniel and others, Incorporators.

Chicago, Ill.—The Chicago, Wheaton & Western Railway has been incorporated to build an electric railway from Wheaton to Maple Park, Ill., where it will connect with the Clinton (Ia.) division of the Aurora, Elgin & Chicago Electric Railway; the general offices of the company are in Chicago and the incorporators are: J. Sidney Condit, J. Percy Strickland, D. W. Peters, R. B. Tabor and H. C. Wood, all of Chicago.

Eldorado, Ill.—The Salina County Traction Company has been incorporated to construct an electric railway from Eldorado through Larrsburg to Carriers Mills, a distance of 17 miles; principal office, Danville, Ill.; capital, \$5,000. Incorporators: L. E. Fischer, Danville; J. A. Swanberg, Springfield; W. L. Murphy, Danville; L. W. Johnson, Danville, and A. C. Murray, Springfield.

Galesburg, Ill.—The Galesburg, Aledo & Northwestern Railroad Company has been incorporated to build an electric railway from Galesburg in a west and north direction through the Counties of Knox, Warren and Mercer to Aledo, and from there through the county of Rock Island to Rock

Island, Ill., and Muscatine, Ia. Capital, \$10,000. Incorporators: Lafayette Weinberg, G. B. Churchill, F. W. Latimer, B. F. Arnold, E. R. Drake, Chas. L. Hibbard, C. F. Hurburgh, Lake W. Sanborn and Thos. W. Peterson.

Harrisburg, Ill.—Promoters are here looking over the ground with a view of connecting Eldorado, Harrisburg and Carrier Mills with an electric line; the project is backed by the McKinley system, and W. A. Haas of Lincoln, Ill., is having a preliminary survey of the route made.

Springfield, Ill.—The Secretary of State has issued articles of incorporation to the Salina County Traction Company, with a capital of \$5,000; J. A. Swanberg, of Springfield; W. L. Murphy, of Danville, and others are incorporators; the new line will cover a distance of seventeen miles, and will extend from Eldorado, through Harrisburg to Carrier's Mills.

Anderson, Ind.—R. H. Beaton, Frank Humphreys and William Knight, of Columbus, O., who are developing a power scheme on the White River at Noblesville, have become interested in the proposed interurban line from this city through Noblesville to Lebanon; Wallace B. Campbell, of Anderson, is promoting the line.

Huntingburg, Ind.—The Town Council has granted a franchise to the Ferdinand Electric Railway to enter Huntingburg; the company will soon enter upon the work of constructing a line from Huntingburg to Ferdinand through Dubois County; the length of the road will be seven miles.

Council Bluffs, Ia.—Preliminary surveys have been made and rights of way secured by the Iowa & Omaha Short Line, recently organized with \$1,000,000 capital to build an electric railway from Omaha, Neb., east to Des Moines, 125 miles. The projected route is from Omaha east via Council Bluffs, Ia.; Treynor, Carson, Oakland, Walnut, Elkhorn, Exira, Panora and Dallas Center to Des Moines; G. W. Adams, President, Walnut; A. L. Ingram, Treasurer, and P. Kathmann, Secretary, of Treynor.

Davenport, Ia.—The promoters of the Rock Island Southern Interurban Railway have closed a lease with Chicago, Rock Island & Pacific Railroad for the use of its tracks from Rock Island to Preemption for the proposed interurban between Davenport, Galesburg, Ill., and Monmouth, Ill. This branch line will be electrified. The construction from Preemption, Ill., south to Aledo Junction will be done by the Walsh Construction Company, of Davenport, and the Rock Island Construction Company will construct the road between Galesburg or Monmouth to Aledo. The cost of the entire improvement, including the building of 31 miles of new road from Monmouth to Preemption, the electrifying of the steam road for 30 miles into this city, and the building of a power plant, which will be located near coal mines on Edwards River, will be approximately \$2,000,000. Those interested in the railway include Edward Hidden, Vice-President Commonwealth Trust Company, St. Louis, Mo., and Walsh Bros., of Davenport.

Des Moines, Ia.—Arrangements for the financing of the Omaha, Council Bluffs & Des Moines Railway are completed; the line as proposed will run from Omaha across to Council Bluffs, through Shelby to Harlan and east between the lines of the Milwaukee & Rock Island through Audubon, Guthrie Center, Dale, Redfield, Adel and into Des Moines.—J. W. Russell, President, Adel; M. H. Miller, Secretary, Ft. Dodge; E. L. Lockwood, Treasurer.

Iowa City, Ia.—Council has granted Henry Negus and A. J. Hamiel, in behalf of the Rundell Land & Improvement Company, a franchise for a street railway in Iowa City; the length of the system will be 5 miles.

Paducah, Ky.—Surveyors who have been working between Paducah and East Cairo, Ill., on the proposed Paducah and Cairo Interurban Line, for several weeks, have entered Cairo to work out a line in that city to the river; the surveyors are headquartered by A. B. Hogue, of Indiana.

New Orleans, La.—The New Orleans Railway Company is considering extending its Dauphine, Lever and Barracks street car lines to Chalmette slips.

Hattiesburg, Miss.—The Hattiesburg Traction Company will plan to develop water power on Bouie River and build plant to generate and transmit electricity; 100,000 horse power will be used.

Carthage, Mo.—W. A. Bixby, General Manager of the Springfield Traction Company, is interested in a proposed electric line to connect Springfield and Carthage.

Kansas City, Mo.—The Sterling Trust Company, organized in Kansas City for the purpose of building a web of interurban trolley lines throughout Missouri, Kansas and Oklahoma, has decided upon the lines which will be built; the present plans call for the expenditure of \$10,000,000 and trolley lines from this city to Topeka, thence to Ottawa, thence Parsons and down to Coffeyville; work is to begin at once.

St. Joseph, Mo.—City has voted \$15,000 in bonds for lighting streets with electricity. —Address Mayor.

Minneapolis, N. Y.—The Nassau County Board of Supervisors has granted the application of the New York & North Shore Traction Company for a franchise to construct and operate a street railway along Broadway, Hicksville, from John street southerly to the Long Island Railroad, and also has given consent to the crossing of the Roslyn road, opposite Clinton avenue, in Mineola.

Rochester, N. Y.—The Mayor and the Railroad Committee of the Common Council, will confer with the officers of the Rochester Railway Company relative to a plan of establishing a crosstown route in the western section of the city, connecting the factory districts of the northwestern section of the city with the factory districts of the southwestern section of the city.

Charlotte, N. C.—The Charlotte Power Company will apply to the Board of Aldermen for a franchise to enter Charlotte with an electric railway.

Akron, O.—The Turkeyfoot Traction Company has made application for a charter to build an electric railway between Akron and Massillon. —Directors: Thomas L. Childs, Charles Esselburn, Charles J. Carey, Frank Ream and D. W. Ruesegger.

Chickasha, Okla.—S. J. Helm, Secretary of the Commercial Club of Gainesville, Tex., and W. H. O'Brien, President of the local electric light company, are promoting a project for building an electric railway from this city to Gainesville.

Miami, Okla.—The Oklahoma, Missouri & Kansas Interurban Railway Company has been organized here with a capital stock of \$100,000 and proposes to build an electric railway from Miami to Lincolnville. D. W. Cooter, Franklin M. Smith, John Hall, R. H. Holton and F. O. Freeman are the incorporators.

Albany, Ore.—A. H. Hirschberg, of Independence, who owns the old "blanket" street railway franchise in Albany and operates a horse car on First street, has sold all of his rights to A. Welch, who holds a franchise for the use of several streets, and will begin work on the electric trolley system at once.

Carrick, Pa.—Carrick & Baldwin Street Railway Company has been chartered with a capital stock of \$6,000, to build a line .35 of a mile long, from this borough to Baldwin Township. —F. K. Martin, Pittsburg, President.

Greensburg, Pa.—With two other companies endeavoring to get into the field the Manor Valley Street Railway Company has let the contract for the construction of a line from Irwin to Herminie; Ryan & Campbell of Latrobe were the successful bidders; work will begin at once; the construction of the road alone will cost about \$50,000; the Manor Valley Company is composed of Irwin and Manor capitalists.

Hanover, Pa.—Capitalists of this place, Manchester, Md., and York, Pa., are considering building an electric railway along the Baltimore pike from this city to Manchester.

Philadelphia, Pa.—An ordinance providing for an increase of the city's indebtedness \$4,000,000, with which to build an elevated railroad from Front and Market streets to the Torresdale Boulevard, has been introduced in Select Council by James Emory Byram, of the Twenty-third Ward, Frankford.

Scottdale, Pa.—The promoters of the proposed trolley line from Jeanette to West Newton have matters in shape for beginning the construction and that work will be started soon; the line will run from Jeanette through Adamsburgh, New Madison, Herminie and to West Newton; the power plant will be located at Arona, and there will be a sub-station at Herminie.

Wellsboro, Pa.—W. A. Selts, of Jersey Shore, Pa., has applied for a franchise to build a street railway system on the streets of Wellsboro and to extend to Mansfield; the company will be known as the Tioga Traction Company and will enter Mansfield by way of Wellsboro street, with a terminal at the corner of Main street.

York, Pa.—H. N. Gitt, of Hanover; W. F. Bay Stewart, President York Railways; W. H. Lanus and others are reported interested in the construction of an electric railway from Hanover to Reisterstown, Md.

Pierre, S. D.—The Des Moines, Council Bluffs & Western Railway, with nominal headquarters at Pierre and a business office at Des Moines, has been incorporated with \$100,000 and will build a road from Council Bluffs to Des Moines, with an Eastern extension to Muscatine; Robert Plimery, Norwalk, Ia.; N. W. Hansen, Haslith, Ia.; R. S. Bannister, of Des Moines, and A. P. Sawyer, of Pierre, Incorporators.

Cleveland, Tenn.—J. P. Parker, Ooltewah, Tenn., has secured practically all right of way for the proposed electric railway from Chattanooga to this city.

Knoxville, Tenn.—Council has granted Knoxville Railway & Light Company franchise to double track its line on Central street.

Brownwood, Tex.—Council has granted W. S. Walker, of Granbury, Tex., a franchise for a street railway in Brownwood; the line will be built from the Frisco depot to the court house, thence to the Santa Fe depot and to the Coggin addition and return.

Ogden, Utah.—The Ogden Rapid Transit Company is considering plans for the extension of its system to Huntsville; the company also plans to build from the Utah Hot Springs north as far as Brigham City; extensions will be built to its local lines south on Grant, Lincoln or Wall avenues.

Salt Lake City, Utah.—Simon Bamberger, President of the Salt Lake & Ogden Railroad, has announced that the active work of getting the new line in shape for the change from steam to electric power will be commenced within a few days; Mr. Bamberger expects to have all trains operated by electricity before the opening of the resort season next year; he will also double track the line between Salt Lake and Ogden, and extend it to the mouth of Ogden canyon.

Bellingham, Wash.—The Whatcom County Railway and Light Company has applied for a franchise for a line on North street, from the intersection of Dock to Yew street, a distance of about a mile. —H. Titcomb, Chief Engineer.

Davenport, Wash.—The Big Bend Traction Company has been reorganized for the purpose of building an electric line along the river. —Address A. A. Turner.

Spokane, Wash.—The Spokane & Inland Empire Railroad Company has filed an application with the Board of County Commissioners for a franchise to run its line on First avenue, east of the city limits for a mile and a quarter; this is an extension of the new line which is to pass the Fair Grounds.

Walla Walla, Wash.—The franchise which has been the bone of contention for several days was passed with several amendments, and the Washington-Oregon Traction Company is now free to go ahead and construct its lines. The ordinance provides a total payment of \$8,000 for the use of the streets, protects the city against a multiplicity of lines on any one street, provides that iron poles must be used in the business districts, and regulates fare to be not more than 5 cents in the city. The franchise allows the company one year in which to construct a mile of track in the city, but does not provide any forfeit for the company failing to do so.

Wheeling, W. Va.—Surveyors are at work on the proposed trolley line from Uhrichsville to the river front and now are working between Colerain and Bridgeport; the next will survey from Harrisville to Cadiz, via New Athens and Bridgeport, O.

Stoughton, Wis.—The Cincinnati Construction Company, which is planning to construct an electric line from Janesville to Madison, has applied to the Stoughton Common Council for a franchise permitting the company to lay its tracks in the streets of the city.

Hamilton, Ont., Can.—The Brantford & Hamilton Electric Railway Company will complete its entrance into Brantford across the canal from Alfred street to the South Market street bridge; the work will require, it is estimated, an expenditure of about \$30,000; trestle work will have to be built a distance of about one-quarter of a mile and the rails laid on this. —Wm. C. Hawkins, General Manager.

BRIDGES

Hot Springs, Ark.—This city is building an arch over Hot Springs Creek, which runs through the city, out of concrete, and will cost \$25,000. —M. H. Jodd, Mayor.

Van Buren, Ark.—Residents of Crawford County are advocating the construction by the county of a bridge over the Arkansas River at this place.

San Diego, Cal.—The Board of Public Works is taking steps for repairing the M street bridge.

Athens, Ga.—Clarke County is to build one or two iron bridges at once. —John B. Gamble, Clerk Board of County Commissioners.

Denver, Col.—Various railroads interested have reached agreement with city for the construction of the \$500,000 viaduct on Twentieth street; H. S. Crocker is Engineer for the city and has completed detailed plans for the work; bids for the structural work are to be asked at once.

Elberton, Ga.—The Elbert County Commissioners will advertise for bids for erecting steel bridge at Grogan's mill, Brewer's and Chapman's mill; the county will vote in October on issuance of \$20,000 bridge bonds. —A. A. Blackwell, County Commissioner.

Ottawa, Ill.—Separate petitions were presented to the County Board by the Commissioners of Highways of the towns of Dayton and Rutland for county assistance in repairing the bridge that spans the Fox River east of Dayton between these two townships; the estimated cost for this work was placed at \$3,730; both petitions were referred to the Road and Bridge Committee; audit on Probate Clerk's office was read, showing a balance due the county of \$2,155.58, and same was appropriated.

Pekin, Ill.—The Bridge Committee of Council reported in favor of building a concrete arch on Becker's lane to take the place of the bridge recently destroyed by fire; the approximate cost will be \$300; committee has been authorized to have the work done.

South Bend, Ind.—The County Commissioners are to erect new bridge over Potato Creek in Liberty Township.

Vincennes, Ind.—Bridge Engineer J. S. Spiker was ordered to view the Antibus bridge in Washington and report to Court of County Commissioners.

Cedar Rapids, Ia.—The city is to build a new bridge at Fourteenth avenue next year to replace the present structure.

Hutchinson, Kan.—Council has under consideration the building of a bridge at A avenue.

Louisville, Ky.—An ordinance has been introduced in the Board of Aldermen providing for the erection of a bridge over Beargrass Creek, in the vicinity of Underhill and Kentucky streets; Joseph Kirwan and Ernest Horn, Aldermen, are interested; it is planned to construct the bridge of either concrete, iron or wood.

Baltimore, Md.—The Harbor Board has approved plans of its Engineer, Oscar F. Lackey, for widening Pratt street bridge over Jones Falls, to a width of 120 feet and the work will probably be undertaken the early part of next year; estimated cost is \$50,000.

Detroit, Mich.—A company is to be organized with a capital stock of \$250,000, for the purpose of constructing the proposed new toll bridge to connect Grosse Ile and the mainland. Plans call for a traffic bridge about three-fourths mile long. P. N. Jacobson, E. W. Voigt, Cameron Waterman and Judge Henry Brevoort are interested.

New Ulm, Minn.—The citizens of Brookville township, Brown county, will vote on issuing \$3,000 bonds with which to build bridge. —A. J. Eckstein, Chairman of the County Board.

Springfield, Minn.—Bids will be advertised for at once for the construction of a steel bridge in this city. —A. J. Eckstein, Chairman of the Brown County Board, New Ulm.

Louisville, Neb.—Business men in Louisville have organized a company to be known as the Platte River Bridge Company, and have selected W. F. Diers as President and James Stander, Secretary; they have decided to wait no longer for Cass and Sarpy Counties to build a bridge across the Platte River at that point, which went out with the big ice crush over two years ago, but will construct one themselves and collect toll.

Dolgeville, N. Y.—The Town Board of Manheim has negotiated a loan of \$5,000 to be used in the construction of a bridge and retaining wall.

Westfield, N. Y.—Another special election will be held to vote on confirming a previous election authorizing the paying of \$35,000 toward the cost of the viaduct to be erected here by the Buffalo & Lake Erie Traction Company.

Cincinnati, O.—Members Mullen, Kellogg and Rippey, of Council, were appointed to confer with the County Commissioners in the matter of erecting a new bridge over the Little Miami River at Beechmont avenue.

The Board of Public Service transmitted an ordinance, accompanied with specifications, for the reconstruction and the repair of the Eighth street viaduct in connection with the "remodeling" of sidewalks with reinforced cement concrete construction on the superstructure and approaches from McLean avenue to Evans street. The ordinance was referred to the appropriate committee.

Agitation for the construction of a viaduct between Arlington Heights and Hawthell for the convenience of the school children, has been taken up by residents of the village, a committee of whom will, in the near future, petition the County Commissioners to take action in the matter. —Address County Auditor, Cincinnati.

Dayton, O.—County Engineer Howard R. Klepinger has about completed the plans for a bridge over the Miami at Needmore road; the plans call for a reinforced concrete bridge, to cost \$10,000.

Massillon, O.—The city proposes to construct lift bridge over Ohio Canal at Main street.

Portland, Ore.—The Ways and Means

Committee has been authorized to sell the proposed \$450,000 bonds for the reconstruction of the Madison street bridge; the committee will immediately proceed with advertising for the sale of the bonds and the City Executive Board will enter into the proper arrangements with the Portland Railway, Light and Power Company in regard to the rights-of-way which this company has over the structure; the charter amendment providing for the construction of the bridge specifies that the receipts from the franchises over the bridge shall exceed \$15,000 a year, which will go toward paying for the cost of the bridge during the life of the bonds.

Sapulpa, Okla.—A bridge to cost \$38,000 will be built across the Canadian River, near Sapulpa.—Address County Auditor.

York, Pa.—The Grand Jury has recommended construction of four new bridges by the county.

Camden, S. C.—The iron bridge across the Wateree River, which was destroyed by the recent floods, will be rebuilt at once; G. G. Hugins can give information.

Memphis, Tenn.—Another new concrete bridge is soon to be built over Gayoso bayou; plans have been submitted to the City Engineer, J. H. Weatherford, by the Union Railway Company, for a bridge at Front street over the bayou.

Austin, Tex.—Plans and specifications are being prepared for bridge to be erected at Congress avenue.

Houston, Tex.—City will at once build new bridge over Buffalo Bayou to replace structure destroyed by recent freshet.

Beloit, Wis.—Council has directed estimates to be secured for replacing the central bridge with a modern concrete structure.—Address City Engineer Caldwell.

Cheyenne, Wyo.—An election will be held in November to vote on the question of issuing \$500,000 in bonds for improving water system.

Norfolk, Va.—W. H. Taylor, Assistant City Engineer, is preparing estimates for replacing two wooden bridges over Duke street and one bridge over Brush street, with concrete culverts.

MISCELLANEOUS

Riverside, Cal.—Council has decided to call an election to vote on the question of issuing \$240,000 improvement bonds.—S. C. Evans, Mayor.

Yuba City, Cal.—Bids are soon to be opened for new Town Hall.

Denver, Col.—The question of erecting a new city jail is now being discussed.—Address Fire and Police Board.

Gainesville, Ga.—The question of issuing \$160,000 in bonds for improvement purposes is under consideration.

Chicago, Ill.—The question of securing property on the north lake front for park purposes is being discussed.—Francis T. Simmons, President of the Park Board.

Linton, Ind.—At a recent meeting of Council steps were taken for purchasing property for a park.

Davenport, Ia.—Members of the Board of Health favor the building of a garbage reduction plant before next year and issuing bonds for the payment; Davenport must take some action in regard to the disposal of its garbage and must do so immediately; Mayor Scott has been collecting data on the various garbage plants throughout the country and will lay this before the Board of Health, and it is planned to appoint a committee to investigate these plants or to get an expert to tell the Board what is the best plan to pursue. It is probable that it will take from \$25,000 to \$50,000 to establish a plant.

Butte, Mont.—Bids are to be advertised for a new playground.

Omaha, Neb.—Council has adopted a resolution for the erection of a new jail at Eleventh and Dodge streets.

Seward, Neb.—Council has accepted plans by Architect Berlinghoff for a new City Hall, to be modern in every detail.

Asbury Park, N. J.—At the meeting of the Asbury Park Beach Committee, among the improvements proposed is a swimming pool at First or Second avenue, with modern bath-houses, the rebuilding wholly or partially of the boardwalk, the enclosing and enlarging of the arcade, the erection of a large pavilion at the foot of Deal Lake, with hot and cold baths, and the extension of the boardwalk to Deal Lake flume. President Steiner suggested a meeting with Mayor T. Frank Appleby and Council, and that at least \$150,000 be voted for these improvements, the same to be raised by bond issue.

The Commission ordered work upon the jetties to be renewed October 1. Over 1,270 feet of jetties were built last spring, and there are still over 200 feet to be added.

Newark, N. J.—Authority to issue county bonds to the amount of \$700,000 has been asked for by the Board of Freeholders by its Finance Committee; there are to be

two separate issues, one for \$500,000, for the work on the Overbrook Hospital, and the other of \$200,000 park bonds. Chairman Nathaniel J. Ward, of the Finance Committee, says the proposed bond issue would carry along the work until December, at least, and explained that the issue of park bonds was requested by the Park Commission for improvements at Weequahic; all the bonds will run for forty years and bear interest at four per cent. per annum.

College Point, L. I., N. Y.—Plans are under way for a new city park; the Non-partisan Taxpayers' Association is back of the scheme.

Rochester, N. Y.—Cobb Hill surroundings are to be improved and a modern new city park laid out.

West Winfield, N. Y.—The people of this village are interested in securing site as soon as possible for the erection of a new Town Hall.—Address the Town Clerk.

Ashtabula, O.—An election will be held to decide the question of issuing \$160,000 bonds for building subway.—Address Mayor Cook.

Cincinnati, O.—Mr. Kellogg's ordinance was passed for a bond issue of \$1,000, to pay the cost of building concrete steps on Eastern avenue adjoining the property of the new water works.

Columbus, O.—The question of a garbage disposal plant for this city is being discussed.

Portland, Ore.—Chief of Police Gritz-macher asks for the erection of a sub-station at Union avenue and Hancock street, where the city recently acquired a parcel of ground.

Beaver Falls, Pa.—The garbage ordinance authorizing the erection of the crematory has been passed on final reading by Council, and arrangements will be made to push the erection of the plant to completion with all possible dispatch; \$16,000 is available.

Kutztown, Pa.—At special election recently \$7,000 bonds was voted for the erection of a new Borough Hall.

Philadelphia, Pa.—The Commissioners of Fairmount Park have petitioned Councils for an immediate appropriation of \$25,000 for maintenance of grounds and \$500,000 for permanent improvements.

The city has taken title from Henry Nichols to a tract of land about 15 acres at Castor and Large avenues, to be used for park purposes.

Pittsburg, Pa.—Councils at their first regular session since the beginning of summer finally passed ordinances submitting to the electors the propositions to issue about \$7,000,000 bonds for municipal improvements as follows: East street viaduct bridge, \$1,000,000; new reservoir for the Northside, \$1,200,000; purchase and improvements of the Monongahela Water Company's plant, \$2,675,000, including \$700,000 for the extension of the water lines; construction of a bridge at Larimer avenue, \$175,000; establishment of incinerating plants, \$185,000; improvement of the Water system in the East End, \$300,000; new market house for Fountain Park square, Northside, \$500,000; construction of a bridge over Negley Run, \$30,000, and for machinery and appurtenances for the filtration plant, \$500,000.

Scranton, Pa.—Lewis & Kitchen, the firm which secured the contract for the installation of the new garbage plants, are seeking bids from local contractors for the erection of two garbage incinerators; as they have furnished a bond to have both plants ready by December 15, it is quite necessary that they get the buildings up without delay; Director of Public Works C. R. Acker is busy preparing the routes for the teams that will do the collecting.

Marlin, Tex.—Bids will be received, October 1, for the purchase of \$50,000 5 per cent., 40-year bridge bonds.—D. H. Doyles, County Judge.

Petersburg, Va.—About \$25,000 is to be expended in improving and rebuilding jail.—Address Mayor.

Madison, Wis.—Upon the recommendation of the Finance Committee, Council voted to issue park bonds of \$30,000 and \$25,000 of bonds for market purposes; the money which will be realized from the park bonds will be used for the completion of Tenney Park. Mayor Schubert said that the money will be expended for the purchase of additional land and for the covering of this land with sufficient soil. A wagon bridge will be built to connect the mainland and the island and it is also proposed to erect two foot bridges. The Mayor said that if any money is left over it will be used toward paying for the bridges. City Engineer Icke estimates the cost of the wagon bridge at \$5,000. Landscape Architect John Nolen estimated the cost of completing the park at \$40,000. An effort will be made to get the money needed above \$30,000 by private subscription.

Milwaukee, Wis.—Improvements are being discussed for the Lake Shore Park; Bay View Park is to be enlarged and greatly improved.

BIDS RECEIVED

Hot Springs, Ark.—This city has just let contracts for paving several street with bitulithic and granitoid; the total amount will cost about \$135,000.—M. H. Jodd, Mayor.

Hartford, Conn.—Contract for the construction of State road work, bids for which were opened at the office of the State Highway Commissioner, have been awarded as follows: Town of Suffield, 1,313 linear feet macadam, to Olmsted & Olmsted, East Hartford, at \$1.21 per linear foot. Other bidders were: Board of Selectmen of Town, \$1.90; A. D. Bridge's Sons, Hazardville, \$1.95; O. T. Benedict, Pittsfield, Mass., \$2.50. Town of North Canaan, 3,680 linear feet combined macadam road, with telford base, to Selectmen of town, at \$1.15 for macadam and \$1.50 for telford; no other bidder; one 24-inch and one 15-inch tile culvert required on work. Town of Trumbull, 2,700 linear feet macadam-telford, on Newtown turnpike, to T. H. Gill & Co., Winter Hill Station, Boston, Mass., \$1.49 for macadam and \$1.90 for telford. Other bidders were: O. T. Benedict, Pittsfield, \$2.25 and \$2.75; B. D. Pierce, Jr., Co., Bridgeport, \$1.99 and \$2.75. Town of Trumbull, 3,000 linear feet macadam, with combined gutters, on Huntington turnpike, to same, at \$1.95 for macadam and 75 cents per square yard for cob. Other bidders were: O. T. Benedict, Pittsfield, Mass., \$2.35 and 90 cents; B. D. Pierce, Jr., Co., Bridgeport, Conn., \$2.22 and 65 cents. Two 15-inch tile culverts with strainer required on work. Town of Winchester, 4,461 linear feet macadam road, with combined gutters and retaining wall, to Lane Construction Company, Meriden, at \$1.66 for macadam, 60 cents per square yard for cobblestone gutters and \$6 per cubic yard for wall. Other bidders were: O. T. Benedict, Pittsfield, Mass., \$1.99, 90 cents and \$6; Pierson Engineering & Construction Company, Bristol, \$2.20, 60 cents and \$6; Joseph Mascetti, Torrington, \$2.30, 50 cents and \$5.50; T. H. Gill Company, Boston, Mass., \$2.35, 75 cents and \$5. One 24-inch, one 18-inch and one 15-inch tile culverts required on work. Town of Granby, 5,700 linear feet macadam and telford road, to A. Bridge's Sons, Hazardville, \$1.44 for macadam and \$1.89 for telford. Other bidders were: Connecticut Contracting Company, Hartford, \$2.11 and \$2.81; O. T. Benedict, Pittsfield, \$1.79 and \$2.29; Pierson Engineering and Construction Company, Bristol, \$1.90 and \$2.40; Lane Construction Company, Meriden, \$1.60 and \$2.10; F. Arrigoni & Bro., Durham, \$1.85 and \$2.40; T. H. Gill Company, Boston, \$1.68 and \$2.08. Two 15-inch tile culverts required on work. Town of Granby, 4,700 linear feet grading with 6-inch hardening top, with railing and culvert, to F. Arrigoni & Bro., Durham, at \$5,000 for road work and \$600 for culvert. Other bidders were: Connecticut Contracting Company, Hartford, \$8.83 and \$525; Amos Bridge's Sons, Hazardville, \$6,800 and \$2,000; O. T. Benedict, Pittsfield, \$5,500 and \$800; Pierson Engineering and Construction Company, Bristol, \$5,400 and \$700; Lane Construction Company, Meriden, \$5,500 and \$900; T. H. Gill Company, \$7,976 entire. Town of Killingly, 3,235 linear feet gravel road on main highway from Danielson to the town, at \$1.05 per linear foot. J. A. Gilbert, Town of Danbury, 935.5 linear feet macadam-telford road on Park avenue, to O. T. Benedict, Pittsfield, Mass., at \$1.78 per linear foot for macadam and \$2.22 per linear foot for telford. This includes about 50 feet of rubble drain. Town of Willington, 800 linear feet rubble drain and telford road, with a 12-inch tile culvert to the T. H. Gill Company, Boston, Mass., at \$1.50 per linear foot. Also 150 linear feet shallow drainage, with 4-inch tile and telford construction to the same contractor at \$1.50 per linear foot. Town of Lisbon (Jewett City postoffice), 800 linear feet gravel road on the Norwich turnpike, to T. H. Gill Company, Boston, Mass., at \$1.25 per linear foot. Town of Guilford, 2,000 linear feet gravel-telford on Clapboard Hill, to F. Arrigoni & Bro., Durham, Conn., at \$1.20 per linear foot.

Newington, Conn.—The contract for the construction of 16,375 linear feet of macadam and 2,100 linear feet telford road, with cob gutters, retaining wall and railing, on the Berlin turnpike in the town of Newington, has been awarded to Frank Arrigoni & Bro., Durham, Conn., at \$2.15 per linear foot for macadam, \$2.65 for telford, \$1.10 per linear foot for rubble drain, \$4.20 per cubic yard for wall and 35 cents per square yard for cobble gutter.

Stamford, Conn.—Bids were received by the Stamford Water Company for the construction of a dam, together with other works necessary to the enlargement of the reservoir: A. B. Griswold, New Britain, Conn., \$103,045; Godwin Construction Company, 30 Church street, New York, \$108,765; E. G. Bangs, New York, \$114,532; R. K. Everitt & Co., Tarrytown, N. Y., \$115,504;

Boston & New York Contracting Company, 220 Devonshire street, Boston, Mass., \$117,745; New York Continental Jewell Filtration Company, 15 Broad street, New York, \$118,480; Bunting, Bull Company, Lever Building, Flushing, N. Y., \$122,100; C. W. Blakeslee & Sons, New Haven, Conn., \$123,322; O'Brien Construction Company, Waterbury, Conn., \$122,320; R. W. Sherman, Utica, N. Y., \$125,770; Arthur McMullen, Stamford, Conn., \$127,710; John O. Merritt Company, Portchester, N. Y., \$129,320; J. B. Malatesta, 3169 Jerome avenue, New York, \$130,925; R. E. Boggs, Charlottesville, Va., \$131,617; Richards & Gaston, 143 Liberty street, New York, \$134,825; Tucker & Vinton, 103 Park avenue, New York, \$139,345; Coleman Bros., 15 Court street, Boston, Mass., \$143,215; Russell Contracting Company, 156 Fifth avenue, New York, \$147,093; United Engineering and Contracting Company, 32 East Thirty-third street, New York, \$149,959; F. Wardwell, Stamford, \$153,210; Decicco Contracting Company, Larchmont, N. Y., \$167,145.

New London, Conn.—The Worcester Conduit and Paving Company, H. J. McGuire, Treasurer, has secured contract, at \$30,000, for brick pavement.

Southington, Conn.—The contract for constructing about 16,000 square yards of macadam road in the borough limits has been awarded to C. W. Tryon, of Meriden, Conn. The borough will do all grading work and the contractor will apply the macadam treatment. It is approximated that 5,000 tons of trap rock will be used, and the contractor will be paid at the rate of \$1.50 per ton.—Samuel H. McKenzie, Borough Engineer.

Torrington, Conn.—The delinquent sidewalk proposition engaged the time of the Board of Warden and Burgesses, when bids of several contractors were received and John De Michiel & Bros., who furnished the lowest estimate, was awarded the contract. The estimates were called for those streets where property owners had been notified to build sidewalks and had failed to comply. The bids, as submitted, were: Patrick Gleeson: Straight curbing, 45 cents per linear foot; circular curbing, 60 cents per linear foot; tar walk, per square yard, 65 cents. C. W. Crockett: Straight curbing, 50 cents; circular curbing, 55 cents; tar walk, 70 cents. Joseph Mascetti: Straight and circular curbing (partial bid), 50 cents; tar walk, 50 cents. John DeMichiel & Bros: Straight curbing, 44 cents; circular curbing, 55 cents; tar walk, 64 cents.

Washington, D. C.—Bids have been opened at the District Building for the construction of an intercepting sewer from the city boundary to Brookland, the construction of two engines for the electric generating plant at the sewage pumping station and for plumbing repairs at the Tenley public school. The bids were opened by E. E. Helm, Acting Chief Clerk of the Engineer Department; Marion Hargrove, Property Clerk, and Dr. William Tindall, Secretary to the Board of Commissioners. The proposals will not be scheduled and listed for several days. From an official accounting E. G. Gummel is low for the sewer work; Hutchinson & McCarthy for the plumbing repairs and B. F. Stintervant Company of Hyde Park, Mass., was low for the electric engines.

The contract for the construction of the East Side interceptor sewer, near Bladensburg road, has been awarded to the Warren F. Brenizer Company, Second and O streets, Washington.

Bids were received as follows: (a) E. G. Gummel; (b) James A. Coyle; (c) Brennan Construction Company; (d) Warren F. Brenizer Company, all of Washington; (e) Sherwood Engineering Company, York, Pa.: Ordinary excavation (a) 79 cents; (b) 70 cents; (c) \$1.25; (d) 95 cents; (e) 67 cents; sewer brick masonry, (a) \$14, (b) \$18, (c) \$15, (d) \$14, (e) \$20; invert brick masonry, (a) \$18, (b) \$22, (c) \$20, (d) \$20, (e) \$22; concrete masonry "D," (a) \$7.75, (b) \$8, (c) \$11.90, (d) \$9, (e) \$8; 6-inch pipe, (a) 20 cents, (b) 30 cents; (c) 40 cents, (d) 30 cents, (e) 30 cents; totals, (a) \$16,841, (b) \$17,010, (c) \$25,222, (d) \$19,777, (e) \$16,949.

Bids were also received as follows for two vertical compound engines at the sewage pumping station: Shepherd Engineering Company, Williamsport, Pa., \$5,126; Sturdevant Company, Hyde Park, Mass., \$5,690; Ball Engine Company, Philadelphia, \$8,944.

E. E. Helm, Acting Chief Clerk of the Engineer Department, announced that the lowest bid opened for furnishing the District two automobile trucks for use in the water department was made by the Cook & Stoddard Company. This company agreed to furnish the machines at \$2,336 each. Other bidders and their prices were: Auto Car and Equipment Company, \$2,500 each; Knox Columbia Company, \$2,400 each; American Motor Truck Company, \$2,500

each, and the Oscar Sear Automobile Company, \$2,800 each.

Tampa, Fla.—The city has awarded the contract to B. L. Davis, of Tampa, for constructing the storm sewer in Jackson street.

Pensacola, Fla.—The County Commissioners have awarded the Logan Fuel and Supply Company the contract for paving New York avenue. The bids were as follows: The Logan Fuel and Supply Company, using coquina for the aggregate and Portland cement, for 84½ cents per square yard. Bigler Bros. & Todd, to concrete, using dead oyster shell for foundation, for 94½ cents, or rock for \$1.14½ per square yard. Kean, Lovelace & McGaughey, using one part cement and five parts coquina, for 88 cents per square yard. F. J. Trout, using either oyster shell or coquina, for the lump sum of \$14,252 or \$1.30 per square yard. D. M. Baker, for laying shell pavement with live Cedar Key oyster shell, laying 10 inches in center and 8 on sides, as per specifications of the County Engineer, at 20 cents per square yard. Or with oyster and Volusia shell for 59 cents per square yard. Foster & Long would use crushed flint rock, as per specifications, for 89 cents per square yard.

Springfield, Ill.—The Board of Local Improvement has awarded contracts as follows: Capitol City Construction Company, Capitol avenue, at \$1.47 per square yard, and Scarritt and Williams street, with asphalt, at \$1.73 per square yard, and to John E. Pretz, of Springfield, for Glenwood avenue, with brick, at \$1.55 per square yard.

Albion, Ind.—The contract for the construction of the Diamond and Mott street sewers at Kendallville has been awarded to the Moeller Construction Company, of Ft. Wayne, at \$12,955.48.

Crown Point, Ind.—Contracts were awarded as follows by the County Commissioners: Forsyth avenue bridge to Paul Mehler; arch culvert, Cedar Creek township, to E. H. Crowell.—Charles A. Johnson, County Auditor.

Bedford, Ind.—The Commissioners of Lawrence County have awarded a contract for the construction of six miles of gravel road in Marshall Township to McNeen Dunn, of Anderson, at \$13,000.

Bloomington, Ind.—The Indiana Creosoting Company has been awarded a contract for furnishing 25,000 square yards of creosoted paving block, requiring 25,000 feet of pine timber.

Delphi, Ind.—The Commissioners of Carroll County have awarded contracts for gravel roads as follows: Road No. 1, Thompson & O'Connor, Delphi, \$3,300; road No. 2, O'Connor & Son, Delphi, \$1,645; road No. 3, E. F. Pierce, Delphi, \$5,990; No. 4, E. J. Barnard, Delphi, \$9,327; road No. 5, Halloran & Hoverstick, Noblesville, Ind., \$10,587.

Ft. Wayne, Ind.—The Board of Public Works will probably ask Council to appropriate money to cover the cost of repairing a number of asphalt streets paved by the former Atcatraz Company; the Metropolitan Engineering and Construction Company was awarded the contract for paving Sixth street, from Wells to Cass, at their bid of \$1.78 a running foot; the Moeller Construction Company was given the contract for cement walks on both sides of Low street, from Barr to Hanna, at 71 cents a running foot; the contract for cement walks on the east and north sides of Edgewater avenue, from Columbia to Crescent, and on the west side of Crescent avenue, from Edgewater to Lake, was let to O. F. Menfee at 53 2-5 cents a running foot.

New Albany, Ind.—The contract for paving portions of East Oak and East Tenth streets has been awarded to Jefferson County Construction Company at \$3.43 per linear foot for Red Paver block.

New Castle, Ind.—The Commissioners of Henry County have awarded a contract for the construction of three miles of gravel road in Greensboro Township to Orb George, of Kennard, for \$9,225.

Terre Haute, Ind.—The County Commissioners have awarded contracts for improving roads as follows: Malady C. Lloyd, the Weeks road, Fidler road and Payne road, in Linton Township, at \$3,945, \$4,280 and \$6,390, respectively; Elijah Reed, the Punch road, and Heck Harlan Lane road in Linton Township at \$3,100 and \$3,200, respectively; T. L. Trueblood, the Eldridge road in Linton Township, \$5,900, and to Harry A. Carpenter, the McClintock County line road, \$10,300.

Vincennes, Ind.—For the construction of the gravel road petitioned for by J. D. Boykin bids were opened and Wm. Bobe, being the lowest responsible bidder, the contract was awarded to him at \$3,550, the same being less than the estimate; gravel road petitioned for by Harden Hollingsworth et al. was let to O. W. Holmer at \$2,084; gravel road petitioned for by John R. Horrall et al. was awarded to Thomas Horrall at \$24,435.

Bids were opened for the construction of two bridges as ordered and advertised and the contract was let to the Vincennes Bridge Company for \$2,250. Wm. Brocksmith was ordered to do the concrete work at bridge in Vidner township, called the Stoeling bridge, and at the bridge on R. T. Cox road, in Washington Township, under the direction of Bridge Engineer Spiker, at \$7 per cubic yard and actual expenses incurred in raising bridge in Vidner township.

The signed contract of the United States Construction and Utilization Company, of Rochester, N. Y., for the disposal of garbage and dead animals, has been approved by the Board of Works; this company proposes to purchase land within three miles of the city and to commence the erection thereon within a period of four months of a modern and sanitary reduction plant, subject to the approval of the Board of Health, and for a period of ten years will dispose of all city garbage delivered to them at their plant, and will also collect up in their own special covered and sanitary wagons, the carcasses of all dead animals, which will be reduced at their plant; the contract is for a period of ten years, and the consideration is to be as follows: For the first four years the city shall pay the company \$800 per year in quarterly payments; during the second four years the city shall pay the company \$1,000 per year; the last two years the city is to pay the company \$1,200 per year. This contract is signed for the company by W. S. Van Buskirk, of Rochester, N. Y.

No provision is made in the contract for the disposal of night soil, the board having decided to leave this as it is at present until such time as a general storm and sanitary sewer system can be put in throughout the city.

Des Moines, Ia.—The Cook Construction Company, city has been awarded the contract for 12 and 10-inch sewers on Ninth street, Wright avenue, Eighth street and Penn avenue, about 4,418 feet; eleven manholes in East Des Moines; also for 1,890 feet 10 and 12-inch sewers on University avenue, Thirty-seventh street and Cottage Grove avenue in West Des Moines.—George D. Dobson, City Engineer.

Fort Dodge, Ia.—The contract for the new pump for the pumping station was awarded by the city to the Canton-Hughes Co., of Canton, O., at \$7,975.

Sioux City, Ia.—F. J. Sulzbach has been awarded the contract for the construction of a two-ring brick sewer in West Fourteenth street, which is necessary before the paving of certain Smith's Villa streets can be undertaken; Sulzbach's bid was \$7,134.10, J. M. Lewis bid \$7,362.30, and the Lytle Construction Company, \$7,436.85; the latter secured the contract for curb and gutter in West Sixth, from Otter to Myrtle streets; this company will begin the excavation work for the six miles of sanitary sewers in Morningside at once, and it is believed a good amount of the work will be finished before snow flies.

Vinton, Ia.—D. E. Keeler of the Peoples Construction Company, of Davenport, Ia., has been awarded the contract for the sewer to be laid this fall, at \$7,236.

Bonner Springs, Kan.—The contract for constructing water works has been awarded to J. J. Donnegan Construction Company, of Shenandoah, Ia., at \$21,000.—D. Clarke Kelly, City Clerk.

Caney, Kan.—J. W. Kelso has been awarded contract for 26,780 square yards two-course brick on 4-inch cinders and 2-inch sand base, at \$1.31½; 11,100 cubic yards earth excavation at 33 cents, and 3,350 linear feet new concrete curbing, at 38 cents; totals, 33,394; Grant, Summer & Cassary, \$35,119.40; Rushmore & Co., \$35,788.10.—Mary E. McMillan, City Clerk.

Leavenworth, Kan.—The County Commissioners have let the contract for the Wells bridge over Big Stranger Creek to the Leavenworth Bridge Company at \$5,000.

Manhattan, Kan.—Contract has been let for a bridge with three 75-foot spans and 18-foot roadway, with reinforced concrete floor and a 4-foot footway at side with plank floor, to the Canton Bridge Company, at \$4,975.—Geo. H. Hungerford, County Clerk.

Bowling Green, Ky.—The new street which the city is constructing on Thirtieth street, between West Chestnut and Park streets, is nearing completion; the grading has been done, and in the near future it will be macadamized; the Bowling Green Concrete Company has been awarded the contract for laying concrete pavements.

Louisville, Ky.—Weber & Company, of Chicago, have been awarded the contract for the building of Section D of the Southern outfall sewer, by the Board of Sewer Commissioners, after several weeks of consultation; their bid was \$186,000, over \$50,000 less than that of their nearest competitor; it is estimated that it will require about a year to finish the work; the section

Perth Amboy, N. J.—Bids for sewers and pavements were received as follows: Oak street sewer: J. K. Jensen, \$827; Johan Jensen, \$870; Martin Hansen, \$983; Andrew Dahl, \$883, and Meagher & Smith.

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Neville street sewer: Meagher & Smith, \$667; Martin Hansen, \$660; J. K. Jensen, \$580, and Johan Jensen, \$520.60.

Lawton place sewer: J. K. Jensen, \$600; Johan Jensen, \$580; Martin Hansen, \$745; O. K. Jorgenson, \$757, and Meagher & Smith (bid informal).

Steadman place sewer: J. K. Jensen, \$600; O. K. Jorgenson, \$719; Johan Jensen, \$520.60; Meagher & Smith, \$667, and Martin Hansen, \$725.

Jefferson street pavement: Meagher & Smith, \$1,462, plus paving; J. K. Jensen, \$1,340, plus paving. The latter item will be about \$1,500.

Fayette street pavement: Meagher & Smith, \$453.75, plus paving; J. K. Jensen, \$409.50, plus paving. The latter cost will approximate \$900.

Resolutions were adopted awarding the sewer contracts to the lowest bidder in each case. The street paving contracts were not awarded, as it must first be determined by the choice of a certain kind of brick. The samples of brick will be tested by the City Engineer.

Plainfield, N. J.—The Committee from the Union County Board of Freeholders which has charge of the plans for the construction of a new bridge on Terrill road over Cedar Brook, of which Freeholder J. Hervey Doane is the Chairman, met yesterday to receive five bids, and Arthur E. Smith, of this city, received the contract, his bid of \$548 being the lowest; the other bids were as follows: Serrell Construction Company, \$618; J. E. Kelly, of New Market, \$657.90; Joseph Moore, of Cranford, \$735; Warren B. Travell, of Plainfield, \$740. The bridge is to be 40 feet long with an 8-foot span and is to be an iron beam, brick arch concrete structure.

Albany, N. Y.—Bids were received by F. C. Stevens, Superintendent of Public Works, for furnishing and erecting three bridge superstructures over the Cayuga Inlet at Ithaca, the bridges to be located at (a) State street, (b) Seneca street, (c) Buffalo street. The bids were as follows: Montour Steel Company, Montour Falls, N. Y., (a) \$8,983, (b) \$6,810, (c) \$6,810; Penn Bridge Company, Beaver Falls, Pa., (a) \$11,240, (b) \$8,970, (c) \$8,970; McClintic-Marshall Construction Company, Pottstown, Pa., (a) \$7,000, (b) \$5,700, (c) \$5,700; Groton Bridge Company, Groton, N. Y., (a) \$8,534, (b) \$7,162, (c) \$7,162; Lewis F. Shoemaker & Co., Harrison Building, Philadelphia, Pa., (a) \$8,765, (b) \$6,994, (c) \$6,994; United Construction Company, 467 Broadway, Albany, N. Y., (a) \$7,461 or \$7,365 (alternate designs), (b) \$6,274, (c) \$6,274 (awarded contract); designs and plans were also called for and submitted with the proposals.

For the second time within a few months Superintendent F. C. Stevens, of the State Department of Public Works, failed to receive any bids for barge canal contract No. 20, involving an expenditure of about \$4,173,900; the contract calls for dredging the Mohawk River, from Rexford Flats to Little Falls, a distance of about 58 miles. Superintendent Stevens probably will ask the advisory board of engineers and the State Engineer to give their official views as to the reason for lack of bids, and also their recommendation as to what course shall be pursued with regard to this contract.

Two bids were received for contract No. 66, calling for excavation near Lockport. The bidders were: Empire Engineering Corporation, of New York, \$750,685, and E. M. Graves, of Cleveland, \$791,191; the State Engineer's estimate was \$751,039.

Buffalo, N. Y.—The McClintic-Marshall Construction Company, Park Building, Pittsburg, Pa., received the contract for the structural steel for the viaduct to be erected by the New York Central Railroad Company and the Grade Crossing Commission of Buffalo over the New York Central Railroad Belt Line at Kensington avenue. The Terry & Tench Company, One Hundred and Thirty-first street and Lexington avenue, New York, will erect same. Contract for eleven other steel structures required for the abolishment of grade crossings on the company's belt line will be placed shortly from that company's offices at New York City.

Rochester, N. Y.—The Board of Contract & Supply awarded contracts as follows: Whitmore, Rauber & Vicinus, 270 South avenue, for trap rock pavement on Charlotte street, at \$8,479; gravel pavement on Schaefer street, to Holder & Bauman, at \$4,460.

Saranac Lake, N. Y.—The Board of Trustees awarded the contract to Eldridge & Grannis, of Ossining, for paving Main street, Broadway, Bloomingdale avenue and Depot street with Mack brick and to build macadam roadways in Upper Broadway, East Main street, Church street, Flower avenue and River street.

Troy, N. Y.—The following bids were received by the Board of Contract and Supply for paving (a) Washington street and

(b) Grand street (price given per square yard): North Hudson Construction Company, (b) asphalt, \$2.70; John H. Gleason Company, (a), brick, \$2.32 and \$2.48; Geo. Hannon, (a), brick, \$2.50 and \$2.62; E. H. McKenna, (a), brick, \$2.32, and granite, \$3.15; (b) brick, \$2.33, and granite, \$3.15; Golden & Lansing, (a) \$2.34, and August J. Lonnell, (a), granite, \$2.92, and (b), granite block, \$2.91.

Alliance, O.—The bids for the paving of South Liberty avenue and East Columbia street were opened by the Clerk of the Board of Public Service, there being five bids submitted for the South Liberty avenue improvement, one of which, that of J. C. Devine, was irregular; the four bids opened and tabulated by the City Engineer are as follows for the work completed: Freshwater & Sons, \$8,215.80 for Alliance paving block; John Wilson, \$6,951.45; Dr. J. C. Temple, \$6,213.52; Stratton & Applegate, \$7,172.14. In all the bids except that of Dr. Temple, a higher price was bid for Minerva block.

In the bids submitted for the paving of East Columbia street the bid of the McGinty Construction Company was low.

Canton, O.—T. K. Turnbull, city, has been awarded the contract for grading, curbing and paving East Lake street, from Belden avenue to Grace street, at his bid of \$8,071.

Cincinnati, O.—The County Commissioners have awarded the contract for the improvement of Blue Ash avenue, from Cooper avenue to the Plainfield pike, and Plainfield pike, from Blue Ash avenue to Montgomery pike, to D. O. Schmidt, at \$11,155, and for the improvement of the Duck Creek road, from Cincinnati to the Deerfield road, to John W. Shields & Bro., at \$38,008.

Columbus, O.—The Service Board has awarded to Jones Bros. a contract for the construction of a levee embankment at the site of the proposed garbage reduction works, along the Scioto River, for \$11,070.

Coshocton, O.—Thomas J. Norman, city, has been awarded contract for 2,000 square yards 4-inch brick, 2-inch sand foundation in place, at \$1.18, including combined curb and gutter; 930 cubic yards sand excavation at 30 cents; totals: Norman, \$3,314.30; J. N. Kissner, city, \$3,583; Vansickle & Atkinson, Newcomerstown, \$3,812.60; John Hall, city, \$3,457; G. H. Burrell, city, \$3,466.50; Geo. Bach & Son, city, \$3,433.

Dayton, O.—The Service Board awarded the contract for constructing the Bolender avenue sewer to William Hilt, on his total bid of \$19,894.10; bond, \$10,000. The contract for building the Germantown street storm sewer was awarded to the T. J. Backus Construction Company on a bid of \$7,992.65; bond, \$4,000. Shafer & Dill received the contract for the Linwood street sewer on their bid of \$3,027.75; bond, \$1,520. Harnish & Pfoutz got the intersection improvement contract for Main street and the Great Miami boulevard on their bid of \$38.

Greenville, O.—The contract for the Sentral avenue improvement was awarded to J. R. Stocker and Thomas Barry on their bid of \$5,600.

Ironton, O.—Bids were opened for 40,000 feet of cement paving and the Ironton Construction Company's bid, a fraction over 8 cents per foot, is claimed to be the lowest price ever given for this class of work.

Lockland, O.—Contract for the improvement of West Ferrer street, Stewart avenue and Wayne avenue, was awarded to B. Niehaus, the low bidder.

Mansfield, O.—C. E. Martin & Bros., city, have been awarded the contract for the dome on the Court House at \$7,265.05; C. M. Rowland, city, contract for power house, etc., at \$3,568; Fitzpatrick & Hoepfner, of Columbus, the heating system, for \$4,670.

Norwalk, O.—The contract for painting the water works standpipe one coat on the outside and one coat on the inside ten feet down, was awarded to W. R. Sprat for \$85; the next lowest bid was \$87.50 by C. O. Clark.

The contract for covering the floor of the high level bridge with creosote blocks was awarded to the Modern Construction Company of Fremont, at \$7,265.47; other bids were as follows: Home Engineering and Construction Company of Canton, \$7,369; R. W. Brown, of this city, \$7,404.20.

Contracts for concrete and stone walks were awarded to Philip Bremser and Fred H. Smith, respectively; the accepted bids were as follows: Cement, per square foot, labor 4 cents, material 6 cents, excess cut, per square yard, 25 cents; excess fill, per square yard, 75 cents. Stone: 2-inch sawed stone, per square foot, labor 2½ cents, material 10 cents; 2½-inch sawed stone, per square foot, labor 2½ cents, material 11 cents; excess fill, per cubic yard, \$1. The bid includes 2½-inch sand cushion and material from Berlin Heights quarries. If Cleveland Stone Company or Ohio Quarries Company material is desired the price for 2½-inch flagging will be 11½ cents per square foot with labor at 2½ cents per square foot.

Piqua, O.—The Board of Public Safety let the bid for draining the springs and ponds at Fountain Park to Winton Bray at his bid, \$210.50.

Portsmouth, O.—Kelley Bros. were the successful bidders for the contract of constructing a storm sewer through School alley in Earlytown at \$387.50.

Toledo, O.—Contracts for paving six streets have been let by the Board of Public Service; the successful bidders being H. P. Streicher and S. J. Pickett. The streets to be improved are: Glenwood avenue, from Islington to Delaware avenue, sheet asphalt, at \$11,001.01, to H. P. Streicher; Putnam street, from Machen to Delaware avenue, sheet asphalt, at \$3,109.20, to H. P. Streicher; First street, East Toledo, from Main to Platt streets, brick, at \$2,310.10, to S. J. Pickett; Boody street, from Segur avenue to Crittenden street, brick, at \$4,472.01, to S. J. Pickett; alley between Wakeman and North Fourteenth street, from Empire street to Woodruff avenue, brick, at \$3,097.95, to S. J. Pickett; alley between Wakeman and North Twelfth streets, from Jackson street to Southard avenue, brick, at \$822.50, to S. J. Pickett.

Warren, O.—Waldeck & Ready, city, have been awarded the contract for the Vienna avenue road and for the Canfield road leading into the city; Chinnock Brothers, city, have been awarded the contract for the construction of a road leading into the city, and F. L. Geiger, city, has secured the contract for the Newton Falls road, between this city and Deavittsburg.

Youngstown, O.—The Board of Health, at a meeting attended by Mayor A. W. Craver, considered bids for the garbage contract. A. F. Scott, who was low bidder for the garbage contract, at \$2.47 a ton, stated that he had made miscalculations in his bid and that he would be unable to take the contract at the price named without great loss, and he asked for permission to withdraw his offer. It was granted and the contract was awarded the next lowest bidder, Charles C. Fisher, of York, Pa., who offered to remove and dispose of the garbage at \$2.90 per ton. Mr. Fisher has the garbage contract in York, Pa.

Muskogee, Okla.—Wm. R. Bush Construction Company, of St. Louis, Mo., was the successful bidder on 36,100 square yards of brick pavement on 5-inch concrete base, grout filler, and 4,920 square yards of double-course brick with grout filler, the prices being \$1.84 and \$1.73 respectively. The price for combined curb and gutter was 65 cents per linear foot, and earth excavation, 31 cents per cubic yard.

The following contracts were let to Peter J. McNeerney, city; 46,140 square yards of rock asphalt pavement, at \$1.89 per square yard; 15,730 cubic yards of earth excavation, at 20 cents per cubic yard; 1,300 cubic yards of loose rock, at 75 cents per cubic yard; 1,300 cubic yards of solid rock, at \$1.50 per cubic yard; 25,060 linear feet of combined curb and gutter, at 65 cents per linear foot; 13 manholes, at \$30 each; 30 catchbasins, at \$32.50 each; 455 linear feet of 10-inch sewer pipe, 70 cents; 420 linear feet of 12-inch sewer pipe, at 80 cents; 720 linear feet of 15-inch sewer pipe, at 90 cents; 360 linear feet of 18-inch sewer pipe, \$1.15; 2,145 linear feet of 21-inch sewer pipe, at \$1.50; 760 linear feet of 24-inch sewer pipe, at \$1.90; 530 linear feet of 27-inch sewer pipe, at \$2.50. Total aggregation of \$118,332.60.

Peter J. McNeerney, city, was also the successful bidder on the following contract of bituminous concrete: 43,931 square yards of 2-inch bituminous concrete on 5-inch concrete base, \$1.86 per square yard; 21,170 cubic yards of earth excavation, 15 cents per cubic yard; 25,360 linear feet of combined curb and gutter, 60 cents per linear foot; 15 manholes, \$30 each; 34 catchbasins, \$20 each; 765 linear feet of 10-inch sewer pipe, 63 cents; 760 linear feet of 12-inch sewer pipe, 73 cents; 390 linear feet of 15-inch sewer pipe, 83 cents; 340 linear feet of 18-inch sewer pipe, \$1.05; 415 linear feet of 21-inch sewer pipe, \$1.30; 805 linear feet of 24-inch sewer pipe, \$1.90; 1,400 linear feet of 27-inch sewer pipe, \$2.20; 1,100 linear feet of 30-inch sewer pipe, \$2.40. Total contract aggregating \$109,860.99. Besides this, two small districts of concrete sidewalk, of 17,000 square feet, were let to Gilkerson & Levy, of this place; prices, 10½ cents and 10½ cents respectively.—L. B. Kinsey, City Engineer.

Eldred, Pa.—W. H. Simpson, of Olean, N. Y., has been awarded the contract for a system of sewerage.

Ellwood City, Pa.—Bids for the furnishing of electric light for the town for from five to ten years by contract were received by Council from the Pennsylvania Power Company and the Harmony line; the bids were referred to the Electric Light Committee for recommendation; the bid of the Pennsylvania Power Company was at the rate of 2½ cents per kw. hour for commercial and street lighting from dark to dawn on a moonlight schedule, and 3 cents per

kw. hour for an all day and night service commercial and street lighting, the street lights to burn when necessary; the Harmony line bid 2½ cents per kw. hour for the commercial and street lighting, continuous service, or at the same rate on the commercial lighting and the street lights to be furnished at the rate of \$40 per year for each light for an all night service.

Forest City, Pa.—The contract for the construction of 18,000 linear feet of sewer here has been awarded to the Westmoreland Construction Company, of Greensburg.

Latrobe, Pa.—William Gibson, city, has been awarded the contract for the construction of the new sewer in John street.

McAdoo, Pa.—The contract for constructing sewers, for which six bids were received, has been awarded by the Town Council to Ludwig Kramer at \$12,178; the highest bid was \$20,642.

Monaca, Pa.—The following bids have been received by the Borough Council for a new furnace: Albert J. Fruth furnace, \$150; Geo. P. Helt, furnace No. 50, Twentieth Century, \$135; Harper Alexander, No. 60 Boomer, \$190; J. C. McMillan, No. 50 Boomer, \$149.50; No. 53 Boomer, \$159.25; W. C. McDonald, Canton, No. 50 High Boomer, \$183; No. 66 Canton Furnace, \$186; No. 56, \$198; Heidrick & Taylor, Monaca Prizer furnace, capacity 70,000 cubic feet, for \$133. On motion of Mullen and Arbogast, outside bids were rejected and other bids were referred to Building Committee, to recommend furnace.

Monongahela, Pa.—Bids were received by the County Commissioners for the construction of a bridge over the Monongahela River as follows: For the superstructure: King Bridge Company, Cleveland, O., \$178,000; McClintic-Marshall Construction Company, Park Building, Pittsburgh, \$175,670; Fort Pitt Bridge Works, Pittsburgh, \$163,900; American Bridge Company, 42 Broadway, New York, \$240,130; Pennsylvania Steel Company, Philadelphia, \$192,800; Mt. Vernon Bridge Company, Mt. Vernon, O., \$189,300; Penn Bridge Company, Beaver Falls, \$189,465; Strobel Steel Construction Company, Chicago, Ill., \$210,000; Toledo-Massillon Construction Company, Toledo, O., \$188,450.

Paint, Pa.—Council has awarded D. A. Malone, of Holidaysburg, the contract for laying 3,000 linear feet of terra cotta sewer.

Pittsburg, Pa.—Mayor George W. Guthrie has awarded to Westwater & Casey the contract for the construction of ten additional filter beds at the filtration plant; the bids were opened several weeks ago, Westwater & Casey being the lowest bidder, but the award was held up until Councils passed an ordinance adding \$100,000 to the \$650,000 that had been previously allowed for the construction and equipment of the beds.

Pottstown, Pa.—Bids were opened by the County Commissioners for the erection of the new county bridge over the Manatawny Creek here, as follows: Willour & Co., substructure, \$19,850; L. H. Focht & Son, complete, \$42,800; James M. Smith, complete, \$35,316; York Bridge Company, York, complete, \$34,405; L. F. Shoemaker, complete, \$37,700; Charles T. Eastburn, complete, \$40,636; John T. Hallman, substructure, \$22,878; McClintic-Marshall Company, Park Building, Pittsburgh, complete, \$36,525; Toledo-Massillon Company, Toledo, O., complete, \$34,250.

Ridgway, Pa.—M. Applegate & Son, of Alliance, O., have been awarded the contract of a sewerage system at \$5,000.—G. Greiner, Borough Secretary.

Wilkes-Barre, Pa.—A paving contract was authorized by the Joint Street Committee for the paving of Lincoln street, between South and Ross streets. Ross street, between Lincoln and Hickory streets, and Hickory street, between Ross and Lehigh streets. Nine bids were received from contractors from different parts of the country and the committee recommended that the contract be awarded to the H. G. Mulock Company, of Atlantic City, which submitted the following bid: For Clearfield Brick Manufacturing Company's block, Clearfield Working Company's block, Clearfield Standard block, Saxton shale block, Scranton shale block, \$1.97 a yard respectively. The committee awarded the curbing to Frank Anstett & Company, who bid 75 cents per linear foot for White Haven 18-inch red stone and 91 cents per linear foot for White Haven 24-inch red stone.

York, Pa.—There were three bidders for the contract to grade Edgar street, between Rouse avenue and Prospect street, and it was awarded to William H. Leib at 17 cents per cubic yard; the other bidders were George Lechrone and J. W. Stahle, each fixing a price of 23 cents.

Stickney, S. D.—Contracts for constructing the water works system have been awarded as follows: For 6-inch well, to A. V. Depue, of Plankinton, S. D., at \$1.75 per foot; remainder of system to Sykes, Stillwell & Kedal, as follows: 6-inch cast-

iron water main, 70 cents; 4-inch cast-iron main, 55 cents; specials, 3½ cents per lb.; hydrants, 90-foot steel tower, 40,000-gallon cypress, pumping station, machinery valves, hydrants, etc.—Dakota Engineering Company, of Mitchell, Engineers.

Bristol, Tenn.—The contract for the construction of the macadamized road from Bristol to Blountville, a distance of ten miles, was awarded to the Kries-French Construction Company, of Knoxville; work is to begin within ten days, and the road will be completed within twelve months. The award was made at the office of John H. Caldwell, Chairman of the Good Roads Commission, empowered to expend the \$100,000 bond issue recently floated for this purpose, and was accepted in person by J. A. Kries, of the Knoxville concern.

Murfreesboro, Tenn.—The city has awarded the contract to Granberry Jackson, Nashville, Tenn., for making a survey of streets and preparing plans and specifications for the construction of a sewer system.

Nashville, Tenn.—Bids for the machinery to be installed in the new \$200,000 addition to the city's electric light and power plant were opened by the Board of Public Works and no action taken, as Superintendent Pentecost desired to examine carefully into each of the bids; the offers were taken in six different divisions, covering all of the various kinds of apparatus to be installed; the total of the lowest bid aggregates \$62,210. The specifications call for the shipment of the machinery any time after March 1, 1909. Division No. 1 includes the turbine and accessories. Only one bid was submitted on this, the Allis-Chalmers Company bidding \$43,490. Division No. 2 embraces the exciters, etc. The Braid Electric Company bid \$7,040, and the Allis-Chalmers Company 6,740. Division No. 3 includes the pumps, one air and three water. The Nashville Machine Company bid \$3,673 on this, and the Allis-Chalmers Company \$3,925. Division No. 4 embraces steam piping. John Bouchard & Sons bid \$3,068.03 and the Nashville Machine Company \$2,725. Division No. 5 includes switchboards and accessories. The Braid Electric Company bid \$5,695 and the Westinghouse Electric and Manufacturing Company \$4,865. Only one bid was received for Division No. 6, a steel water tank, and that was from the Nashville Machine Company. This bid was \$267. This local firm will probably be awarded the contract for nearly \$7,000 worth of the work.

The Board of Public Works has awarded the contract to Curtis & Le Sueur, of Nashville, for constructing a trunk sewer in Crutcher and South Fifth streets.

Contracts were awarded for the construction of three new streets in the Twentieth Ward by the Board of Public Works. E. T. Lewis & Co. will build Cleveland street and Arrington street and J. A. Webb will build Richardson street. The bids on Arrington street were as follows: Quinn & Ellis, \$774.47; John Broderick, \$813.85; J. A. Webb, \$776.35; E. T. Lewis, \$710.85; M. J. Conniff, \$742.90; Curtis & LeSueur, \$790.20. The following bids were received on Cleveland street: Quinn & Ellis, \$1,497.20; John Broderick, \$1,478.70; J. A. Webb, \$1,381.30; E. T. Lewis, \$1,348.55; M. J. Conniff, \$1,364.40; Curtis & LeSueur, \$1,400. The following bids were received on Richardson street: T. V. Barnesfield, \$2,060.76; Quinn & Ellis, \$2,353.88; John Broderick, \$2,487.65; J. A. Webb, \$1,936.10; E. T. Lewis, \$2,096.50; M. J. Conniff, \$2,226.05; Curtis & LeSueur, \$2,304.55. Arrington street will be graded and macadamized between Fifth and Sixth streets, a length of 370 feet, the street to be 40 feet wide. The appropriation for the grading and macadamizing, exclusive of guttering, is \$1,500. The following are the quantities mentioned in the specifications: Excavation, 1,114 cubic yards; bedding stone, 173 cubic yards, and macadam, 150 cubic yards. Cleveland street will be worked from Fifth to Seventh streets, a length of 790 feet. It will be 50 feet wide. The appropriation, exclusive of guttering, is \$1,900. The quantities required are: Excavation, 1,460 cubic yards; bedding stone, 419 cubic yards, and macadam, 362 cubic yards. Richardson avenue (Scott) will be worked from Meridian to Fourth street, a length of 1,060 feet. It will be a 50-foot street. The appropriation, exclusive of guttering, is \$2,350. The quantities are: Excavation, 2,509 cubic yards; bedding stone, 728 cubic yards; macadam, 626 cubic yards.

San Antonio, Tex.—The General Supply and Construction Company, of Fort Worth, has secured the contract for about 21,000 square yards of paving on Houston street.

Seattle, Wash.—The Allis-Chalmers Company, Milwaukee, Wis., has been awarded the contract by the Board of Park Commissioners for the installation of a stone crusher at Franklin, at \$6,500; the crusher is to have a capacity of 2,000 yards a day and the stone will be used in the construc-

tion of the Lake Washington boulevard; two other bids were received.

The contract for laying water mains in East 50th and other streets has been awarded by the city to E. T. Smart & Co.

Walla Walla, Wash.—John Freis was awarded the contract to grade and sidewalk North Ninth street from Elm to Reese, the contract price being \$1,048.59 for the work.

Pennsboro, W. Va.—The U. S. Construction Company of Columbus, O., submitted low bid and was awarded contract for building pipe distribution system and water storage tank, in connection with the water works, at \$7,197; other bids were as follows: The Scholl Engineering Company, Youngstown, O., \$12,700; J. E. Wright Construction Company, Wheeling, \$110,197.13; McCay Engineering Company, Baltimore, Md., \$9,135; Osborn & Fuccy, contractors, Clarksburg, \$8,385; J. W. Curry, contractors, Parkersburg, \$8,300; Cantrel Construction Company, Parkersburg, \$7,993.10.—W. J. Nutter, City Recorder.

Columbus, Wis.—The Advance Construction Company, Waukesha, has been awarded contract for construction of sewers as follows, using vitrified pipe, clay excavation, ground water to be handled, and no paving to be excavated and relaid: 5,989 feet 6-inch, in 7-foot trench, at 35 cents; 2,616 feet 8-inch, 8½-foot trench, 49 cents; 1,130 feet 10-inch, 18-foot trench, \$2.23; 2,266 feet 12-inch, 6-foot trench, 61 cents; manholes, \$29; lamp holes, \$7.50; rock excavation, \$3 per cubic yard; sheathing left in trench, \$23 per M; septic tanks, 33x76 feet, concrete, reinforced, \$3,275; wages of common labor, \$1.50 per day.

The totals of bids received were: Advance Construction Company, \$11,455.15; Chicago Drainage and Construction Company, Chicago, Ill., \$14,003.38; R. Nelson, Racine, \$12,897.83; W. A. Harley, Beaver Dam, \$12,013.68; F. E. Kaminski, Berlin, \$13,424.61; C. Johnson, Oshkosh, \$15,106.51; E. R. Harding, Racine, \$12,425.60; C. C. Sauer, Chicago, Ill., \$12,063.18; W. C. Fraser, Rochester, Minn., \$17,137.05; O'Neill & Preston, St. Paul, Minn., \$17,953.85.—E. B. Parsons, Watertown, Civil Engineer.

Toronto, Ont., Can.—The Department of Public Works has awarded the contract for constructing a bridge over the Blanche River in the District of Temiskaming, to Sinclair & Smith, of New Liskeard, Ont., at about \$5,000.

PATENT CLAIMS.

896,616. Concrete Spreader. James E. Briggs, Waterloo, Ia., assignor to Briggs Labor Saving Specialty Company, Waterloo, Ia. Serial No. 336,365. Renewed. Serial No. 444,366.

A concrete spreader, comprising a wheeled hopper provided with a transverse discharge-opening, a hinged door adapted to close the said opening, a hand-lever pivotally connected to said hopper, a lever pivoted on a stud to said hopper, links connected between said levers and a lever, also on said stud, a lever connected between the lever and said hinged door, and a chain connecting the upper ends of said levers.

896,758. Apparatus for Handling Drain-Tile. Edward Raye, Nevada, Ia. Serial No. 395,295.

In an apparatus for handling tile and the like, a skeleton hook consisting of an oblong upper part and a mating lower part united at one end and the two parts extended in parallel planes, links connected with the upper part of the hook and with each other for suspending the hook and means for suspending the hook to operate as set forth.

897,039. Process for Purifying and Filtering Water. Alfred Vogelsang, Dresden, Germany. Serial No. 369,713.

The herein described process for purifying and filtering water according to a biological purifying process, consisting in passing the material to be purified or filtered through a purifying or oxidizing body, adding ozone in small quantities to fresh air for the purpose of rendering the oxygen in the latter more active and effective without disturbing the biological process, and then passing the ozonized air through the purifying or oxidizing body in a direction different to that in which the material to be filtered or purified passes.

897,080. Process for Preparing Paving or Building Blocks. Rocky C. Gangewere, South Bethlehem, Pa. Serial No. 384,253.

A process of making building or paving blocks consisting in conveying fresh slag directly from a blast furnace to a pulverizer, applying water to said slag between the furnace and the pulverizer thereby granulating the slag, mixing Portland cement with said granulated slag, during pulverization of the slag, conveying the pulverized mixture to suitable presses and pressing the same into blocks, and moistening said blocks after they come from the press.

PROPOSALS

SEWAGE DISPOSAL WORKS, INTERCEPTOR, FORCE MAINS

Office of the Sewerage Commission
of the City of Baltimore.

Sealed proposals, indorsed "Proposal for Constructing the Sewage Disposal Works, Sanitary Contract No. 30"; "Proposal for Building West Low Level Interceptor, Section 4, Sanitary Contract No. 31"; "Proposal for Building Force Main Sewer, Sanitary Contract No. 32"; "Proposal for Building Force Main, Sanitary Contract No. 33"; addressed to the Board of Awards of Baltimore City, will be received at the office of Mr. J. Sewell Thomas, City Register, City Hall, Baltimore, Md., until 11 a.m., Wednesday, October 14, 1908, for constructing the Sewage Disposal Works, on the west shore of Back River, Baltimore County, Md.; the West Low Level Interceptor, Section 4; the Force Main Sewer, and the Force Main, as shown in plans on file in the office of Mr. Calvin W. Hendrick, Chief Engineer of the Sewerage Commission.

Specifications and plans can be obtained upon application at the office of the Sewerage Commission, Room 904, American Building, Baltimore, Md., on and after Saturday, September 26, 1908. The following charges will be made for each specification with blue prints:

Sewage Disposal Works, Sanitary Contract No. 30.....	\$15.00
West Low Level Interceptor, Sanitary Contract No. 31.....	5.00
Force Main Sewer, Sanitary Contract No. 32.....	5.00
Force Main, Sanitary Contract No. 33.....	5.00

These charges will be refunded upon return of the unused specifications and plans in good condition.

A certified check of the bidder, for the respective amounts shown below, on a Clearing-house Bank, made payable to the order of the Mayor and City Council of Baltimore, will be required to be deposited with each bid:

	Amount of Check
Sewage Disposal Works, Sanitary Contract No. 30.....	\$20,000
West Low Level Interceptor, Sanitary Contract No. 31.....	5,100
Force Main Sewer, Sanitary Contract No. 32.....	5,500
Force Main, Sanitary Contract No. 33.....	4,800

APPROXIMATE QUANTITIES:

Sewage Disposal Works, Sanitary Contract No. 30

31,000 cu. yds. excavation.
9,800 cu. yds. backfilling.
3,500 cu. yds. rolled embankment.
2,925 lin. ft. vitrified pipe drains.
9,600 lin. ft. vitrified pipe underdrains.
34,930 lin. ft. vitrified pipe lateral distributors.
521,500 lin. ft. slotted vitrified tile slabs.
38,800 cu. yds. concrete masonry.
1,300,000 pounds reinforcing rods.
350,000 sq. ft. reinforcing wire fabric.
381 tons cast-iron pipe and special castings.
2,300 lin. ft. vitrified tile electric conduit.
1,150 lin. ft. lined metal electric wire conduit.
320 flushing hydrants.
5 Venturi meters.
114 sluice gates.
1 meter house.
1 control house.
4 pump houses.

West Low Level Interceptor, Sanitary Contract No. 31

2,248 lin. ft. 60-inch diameter brick and concrete sewer.
2,041 lin. ft. 51-inch diameter brick and concrete sewer.
700 cu. yds. brick masonry.
3,220 cu. yds. concrete masonry.
21,500 pounds reinforcing steel.
4,500 lin. ft. underdrains.
505,000 feet sheeting left in place.
16,000 lin. ft. piles.
3,550 sq. yds. waterproofing.
2,000 lin. ft. house-connections.
2 bellmouths.

Force Main Sewer, Sanitary Contract No. 32

4,500 lin. ft. 99-inch diameter brick and concrete sewer.
775 cu. yds. brick masonry.
8,135 cu. yds. concrete masonry.
35,000 pounds reinforcing material.
2,000 lin. ft. underdrains.
250,000 feet sheeting left in place.
12,000 pounds cast-iron.
4,000 lin. ft. house-connections.

Force Main, Sanitary Contract No. 33

5,221 lin. ft. 42-inch double line cast-iron force main.
6,690 lin. ft. Class "A" pipe.
3,534 lin. ft. Class "B" pipe.
62 tons special castings.
225,000 feet sheeting left in place.
4 42-inch single face gate valves.

The successful bidder on each contract will be required to give bond and comply with the City Charter respecting contracts. The Board of Awards reserves the right to reject any and all bids.

By order of the Sewerage Commission:
PETER LEARY, JR.,
Chairman.

HARRY W. RODGERS,
Secretary.

Approved: J. BARRY MAHOOL,
President Board of Awards.

CIRCULAR BRICK SEWER

Wilkes-Barre, Pa.

Sealed proposals will be received by the undersigned, until Monday, October 26, 1908, at 12 o'clock noon, for constructing about one mile of circular brick sewer in the city of Wilkes-Barre, Pa. All information, including specifications and bidding blanks, may be obtained by addressing B. K. Finch, City Engineer. Each bid must be accompanied by a certified bank check in the sum of five thousand dollars, made payable to the City Treasurer. The Joint Sewer Committee reserves the right to reject any or all bids.

Proposals must be plainly endorsed "Proposals for Sewer" and addressed to Fred H. Gates, City Clerk.
(13-14)

WATER WORKS

Sealed proposals, addressed to the Hon. J. Morris Roberts, Mayor, will be received by the Borough Council of Haddonfield, N. J., until 8 o'clock p. m., October 6, 1908, for furnishing all the material and performing all the labor required in the construction of a municipal water works.

The work includes:
About eleven miles of cast iron or other approved pipe, also special castings, valves and fire hydrants.
Power house and foundations
Standpipe, 25 feet diameter by 110 feet high.
Laying all pipe lines.
Two 1,000,000-gallon producing units, steam, gas producer or gasoline.
And two or more artesian wells.
Bids for the whole work must be accompanied by a certified check of five thousand (5,000) dollars, made payable to the Borough Treasurer.
All bids must be made on blank forms. Blank forms and specifications may be obtained from the Borough Clerk, and the plans may be seen at the Borough Hall or at the office of the Engineer, George Pfeiffer, Jr., 27 Market street, Camden, N. J.

The right is reserved to accept any bid or reject any or all bids.
(Signed) ALLEN CLYMER,
Borough Clerk.

STREET IMPROVEMENT

Kirksville, Mo.

Sealed proposals will be received by the City Council, until 5 o'clock p. m., Sept. 29, 1908, for brick paving and combined curb and gutter.

Estimated quantities:
19,800 square yards vitrified brick pavement.
9,500 feet combined curb and gutter.

H. SELBY, Mayor.
J. C. CAROTHERS, City Clerk.

DAM AND RESERVOIR

Cimarron, N. M.

Bids are wanted for the construction of a large rock fill and reinforced concrete dam and reservoir in Colfax County, New Mexico. For plans and specifications address

E. H. FISHER,
Cimarron, N. M.

WATER WORKS

Notice to Contractors

Passaic, N. J.

By direction of the City Council of the City of Passaic, New Jersey, proposals are hereby invited for:

First—Distributing, laying, etc., about thirty-seven (37) miles of six (6) inch to twenty (20) inch pipes, hydrants, gate valves, specials, etc.

Second—Furnishing and delivering the said pipes, hydrants, gate valves, specials, etc.

Third—Furnishing a new water supply from three (3) million gallons per day up to twelve (12) million gallons per day, to be taken from wells or surface streams.

All proposals must be in conformity with the forms of proposal and specifications adopted by the Committee on Water Supply, of which printed copies may be obtained at the office of the City Clerk or the City Surveyor of said city.

The city reserves the right to reject any and all proposals. All proposals must be submitted in a sealed envelope addressed to the Committee on Water Supply, care of the City Clerk, on or before the thirtieth day of October, 1908, at 8 o'clock P.M.

A certified check for one thousand dollars to the order of the City Treasurer of the City of Passaic, N. J., must accompany each bid, to be forfeited to the city if the bidder in the event his proposal is accepted, shall not within ten days thereafter enter into proper contract for carrying out his proposal.

GEORGE K. ROSE,
JOSEPH SPITZ,
HERMAN FRIEND,

Committee on Water Supply of the City
Council of the City of Passaic, N. J.
(12-18)

ELECTRIC LIGHTING

Notice to Bidders

Oneonta, N. Y.

Sealed bids will be received by the undersigned Village Clerk of the Village of Oneonta, N. Y., up to 8 o'clock, p. m., Tuesday, October 20, 1908, for lighting the streets of the village of Oneonta with arc lights. Bids to be for about 100 arc lights of 2,000 nominal candlepower each, to burn all night, pursuant to specifications on file in the office of the undersigned.

Bids to be on one or both of the following propositions:

1. For lighting for five years from March 1, 1909.
2. For lighting from March 1, 1909 to September 15, 1912.

The right is reserved to reject any and all bids.

Dated September 16, 1908.
HENRY D. McLAURY,
Village Clerk.
(13-14)

MECHANICAL FILTER PLANT

Cohoes, N. Y.

The Board of Water Commissioners of Cohoes, N. Y., have decided upon November 2, 1908, as the final date for the filing of plans and specifications with approximate estimate of the cost of a mechanical filter plant for the City of Cohoes, N. Y.

Plans must be on file at the office of the Water Commissioners on or before the above mentioned date.

H. L. SHAVER, Pres.

ARTESIAN WELL

Harrisonburg, La.

The Police Jury of Catahoula Parish will receive sealed bids until noon October 5, 1908, for a four-inch artesian well. The Jury reserves the right to reject any or all bids. Bids to be sent to Clerk of Police Jury, Harrisonburg, La.

SPECIAL NOTICE

The City of Tyler, Texas, presents an inviting field for a Street Railway. Anyone interested in that line would do well to write the Mayor. Correspondence solicited.

JNO. H. BONNER, Mayor.
(9-10-11-12-13)

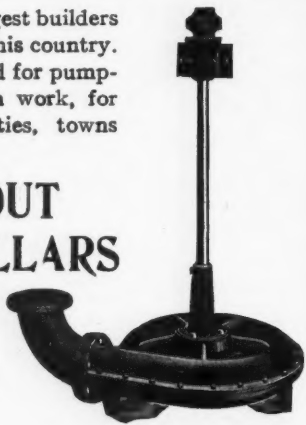
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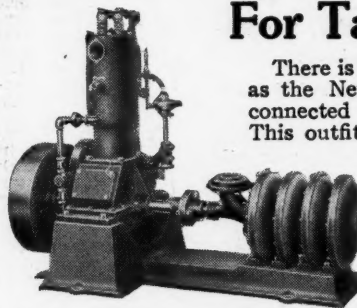
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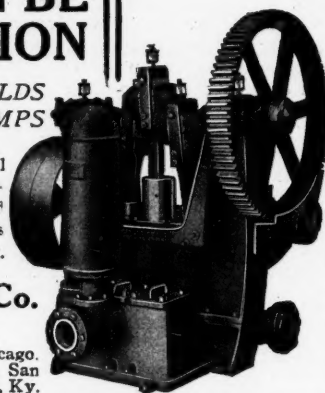
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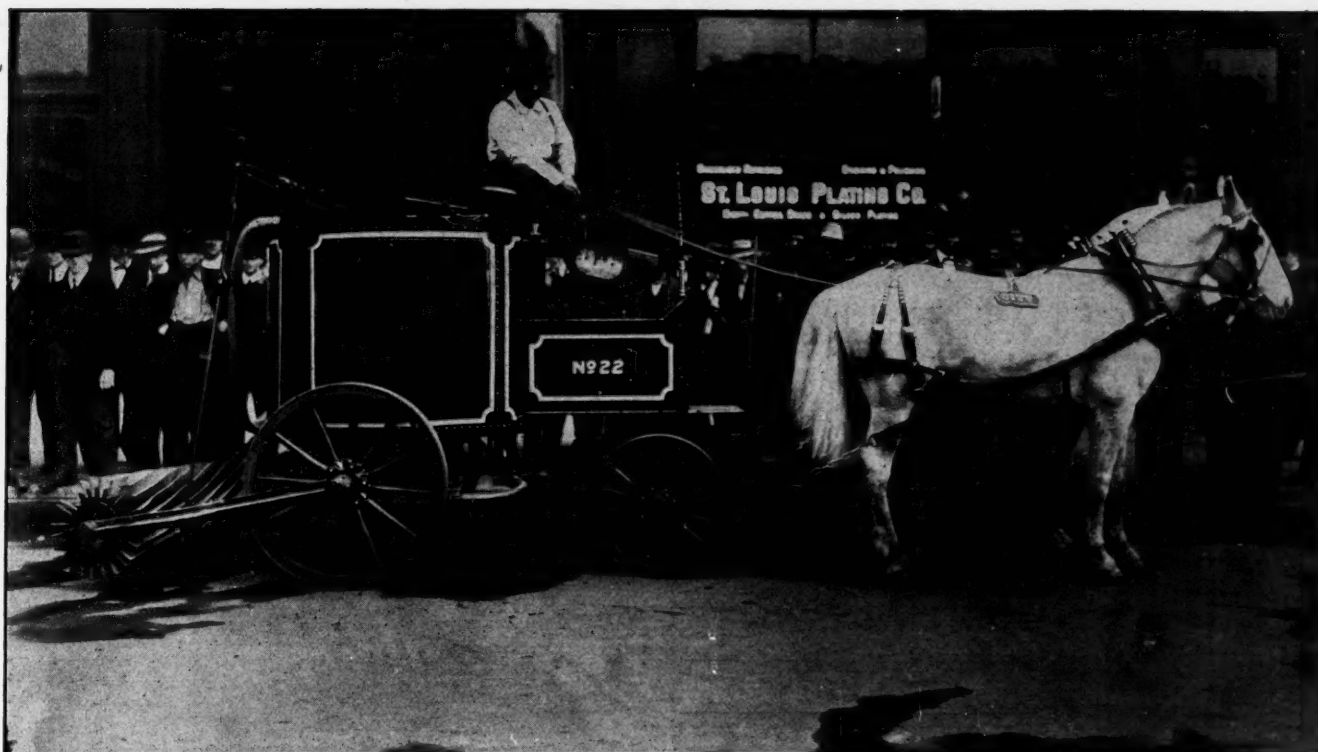
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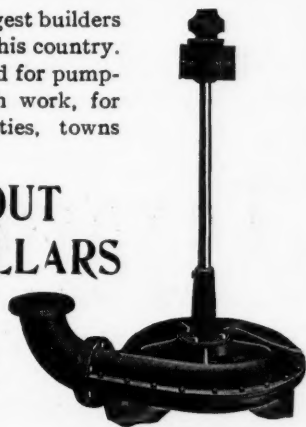
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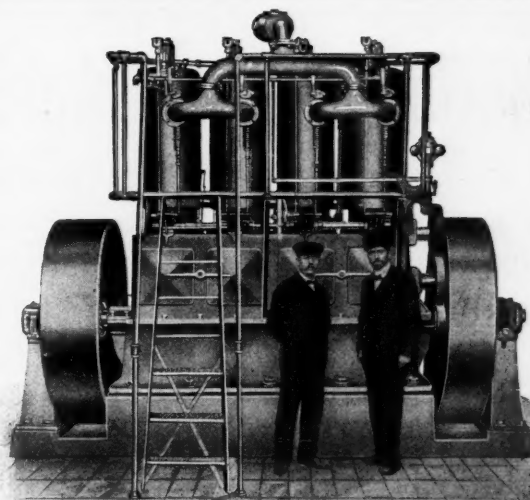


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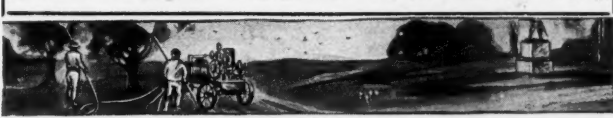
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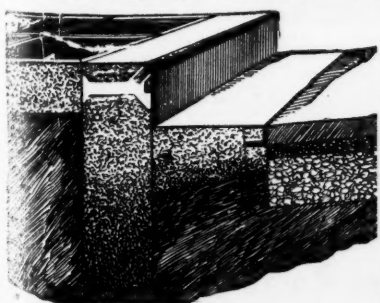
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Gate Valve



Fig. 47
12" Coffin Flap Valve



Fig. 41
30" Coffin Flap Valve
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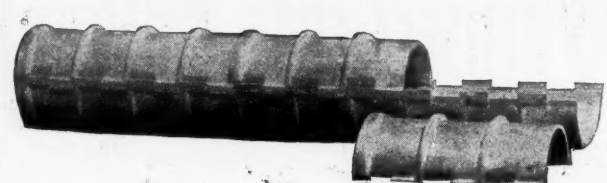
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